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# **A Study of Indian Print Exports to the United States**

By

**Karthik Narayan Ravi**

A thesis submitted in partial fulfillment of the requirements  
for the degree of Master of Science  
in the School of Print Media  
in the College of Imaging Arts and Sciences  
of the Rochester Institute of Technology

May 2008

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School of Print Media  
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Rochester, New York

Certificate of Approval

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Master's Thesis

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This is to certify that the Master's Thesis of

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for the thesis requirement for the Master of Science degree  
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## **Abstract**

Offshoring is the reality of globalization. According to a survey conducted by trendstowatchgraphics.com, the percentage of American print providers who are worried about US print buyers offshoring their print requirements increased from 1% in 1995 to 7% in 2005. According to a survey conducted by the Graphics Arts Technical Foundation, 40% of the printers in the US think that their current customers are also seeking out offshore printers for their printing needs. According to UN Comtrade, exports of printed matter to the US from China in 2005 amounted to \$722 million, and exports of printed matter to the US from India during the same period amounted to \$52 million (*The market for overseas print providers*, 2006).

China is currently the preferred destination for US print buyers for offshoring their print requirements. But India, having invested heavily in education, is likely to see phenomenal growth in the upcoming years. While China is well-known for manufacturing, India has grown in the IT sector. India is also developing its infrastructure to enhance growth in the manufacturing sector. According to Mr. Regis Delmontagne, former president of the Association for Suppliers of Printing, Publishing, and Converting Technologies (NPES):

India, today, is not merely a target market for products from outside its borders . . . and not just a place foreign customers will turn for less expensive printing. It is also a source of new products, new technologies, and new ideas. . . . The United States remains India's largest trading partner, providing both a market for Indian goods and services and a dependable flow of the latest technologies to help India continue its competitive emergence. (as cited in Association for Suppliers of Printing, Publishing, and Converting Technologies, 2006)

This thesis reports on the results of two surveys: one sent to book publishers in the US and the other sent to Indian print service providers. The main results of the thesis are as follows:

- Turnaround times and quality concerns are the biggest barriers prohibiting the growth of Indian printers in the US print buying market.
- The US book publishers are not aware of the manufacturing capabilities of the Indian printers. They are more prone towards sending their pre-media requirements to India
- Confidentiality, level of technology and infrastructure, and range of services offered by the Indian print service providers are the three main criteria by the US book publishers while selecting Indian print service providers.
- There is definitely an opportunity for the Indian print service providers in the US print buying market if they can create brand name, pay more attention to quality, establish a common medium for communication, and plan and schedule accurately.

## **Chapter 1**

### **Introduction**

#### **Background and Significance**

Offshore printing has been a much-debated topic over the last year and a topic for informal discussion for slightly longer. Except for book publishers and catalog printers, no one really looked at the market for offshore commercial printing. The phenomenon was merely background noise in a print production marketplace that was more concerned with production technologies, workflows and standards, postal regulations, corporate budgets, pricing pressures, and overcapacity. However, sometimes a topic that begins as background noise develops into an imperative issue (Webb, LiPetri, Papineau, & Naselli, 2005).

In many industries, offshore competition has become another reality of doing business in a market that is becoming more global in nature. In some cases where offshore expansion has taken place, joint ventures and alliances have become common business strategies. However, printing industry participants, with a few exceptions, have never considered developing strategies to combat global competition. But technological advancements in telecommunications (especially the Internet), desktop publishing, software and hardware systems, and global financial systems, along with newly developing



economic freedom in developing nations like India and China, have changed the environment considerably (Webb, LiPetri, Papineau, & Naselli, 2005). The time has come for executives to analyze how offshore printing may affect the local, regional, and national markets.

The US printing industry has largely avoided the threat of global competition. Until now, printing business has been conducted mainly locally and regionally because clients find it easier and more flexible to deal with local print vendors. However, with advances in technology and communication, the scenario has changed. Old production techniques made working with distant printers difficult, but current technology and economic factors are enabling offshore printers—especially those that are equipped with multicolor offset presses and digital workflow—to look for work beyond their borders.

### **Reasons for Interest**

The findings of this thesis will highlight the expectations that book publishers have from the Indian print service providers. It will also point out the areas Indian print service providers need to look into to create an opening in the US book publishing market. Hence, the thesis will eventually help Indian print service providers to get a broader perspective on the US book publishing market. The research findings will enable US print providers to understand buyer behavior and buyers' reasons for purchasing their print offshore. The findings of

this thesis will enable US print providers to fight off global competition and become more competitive.

There is a personal interest attached to this thesis. I hail from a family run printing business back home and the results of this study will enable my company to find out the business potential in the US print buying market.

## **Chapter 2**

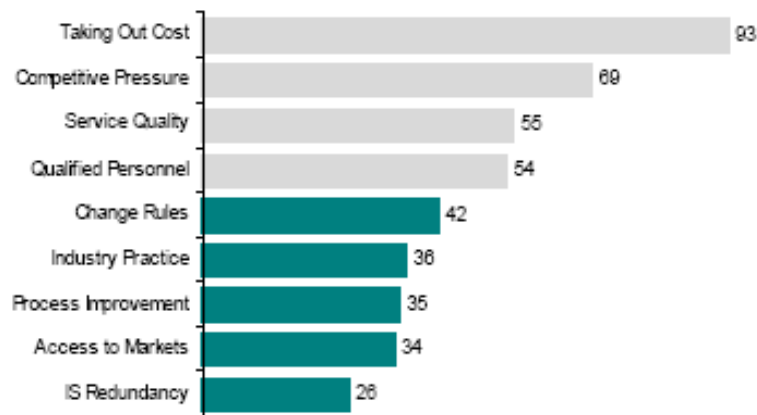
### **Literature Review**

#### **What Is Offshoring?**

According to Wikipedia, “Offshoring describes the relocation of business processes from one country to another. This includes any business process such as production, manufacturing, or services.” Offshoring can generally be categorized into production offshoring and services offshoring. After it joined the World Trade Organization (WTO), China became one of the preferred destinations for production offshoring. India, by making technical progress in the telecommunication sector, became one of the preferred destinations for service offshoring. The main logic behind this phenomenon is to reduce cost. Offshoring enables countries to trade freely with other nations where the cost involved is minimal (*Offshoring*, n.d.).

US firms have been offshoring their manufacturing facilities to low-wage countries for two main reasons. First, by having a presence in these countries, firms are able to have access to the newly emerging markets. Second, operating in low-cost/wage countries enables the US firms to compete with their global competitors. In a survey conducted by a research team at Duke University, 93% of the business firms surveyed pointed to “saving costs” as the primary driver for

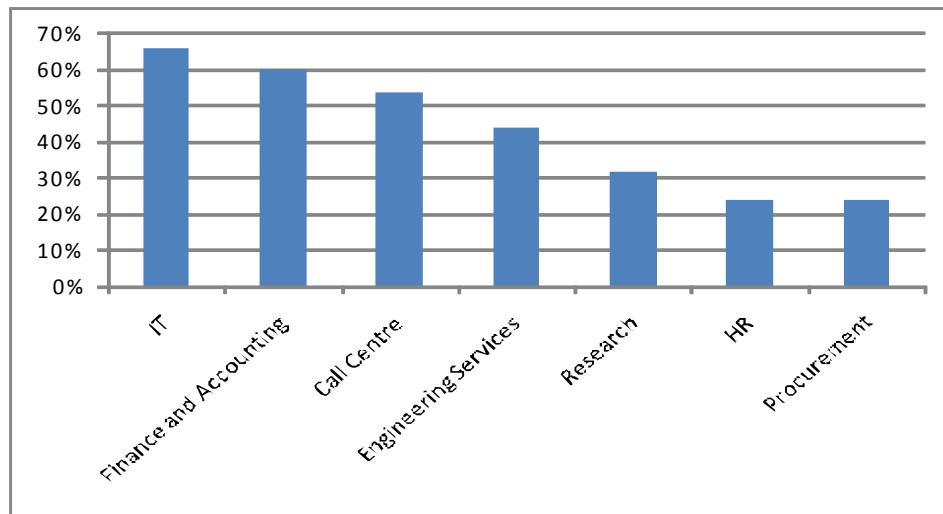
offshoring. Sixty-nine percent of the respondents mentioned “competitive pressure” as a significant driver. Moreover, surprisingly, 54% agree that availability of qualified personnel was a major driver for offshoring (Lewin & Furlong, 2005). Figure 1 shows the major drivers for offshoring.



**Figure 1. Key drivers for offshoring.**

*Source:* Duke University/Archstone Consulting

During the year 2000, the Y2K phenomenon consumed global IT resources. Software coding work rectifying programs was offshored to India due to the presence of skilled and inexpensive personnel. This opened the door for other business processes to be offshored. Business firms are more likely to offshore other processes after having offshored IT, finance/accounting functions, and call centers (Lewin & Furlong, 2005). Figure 2 gives a broad view of the different types of business processes that are offshored.



**Figure 2. Business processes offshored (% of companies offshoring the function).**

*Source: Duke University/Archstone Consulting*

## **Current State of Offshoring in the US Printing Industry**

### **Background**

Offshoring has existed in the printing industry for a long time, but it has really come of age during the past 15 years due to the boom of European and US print brokers. Due to the rise in the number of print brokers, many publishers are interested in getting their products produced in places like China, India, and Eastern European countries. The domestic printers in the US are facing stiff competition from overseas printers, with China and India posing the major threat. China has seen a phenomenal increase of 244% in exports, while India, having invested in education, is likely to compete with China in the near future

(Frauenheim, 2005). According to one of the articles published on the Graphic Arts Information Network (GAIN) website:

Offshoring of 4-color printing/digital technology makes it easier for a publisher to print overseas where it's deemed to be more cost effective. Coffee table/art books, 4-color/high value juvenile books, and some religious and professional books are particularly vulnerable to this trend, primarily from China. (Bland, 2004)

While there are many factors that influence offshore printing, such as the rapid progress of developing economies in Asia and Africa, the factor that has had the largest impact on offshore printing is the Internet. Although geographically Asia is far away from the US, when a print buyer is emailing or sending files through FTP, it does not make a difference if the print provider is across the street or the world. "The issues that had a negative influence on offshore printing earlier have been obviated by fewer quality control demands and less color accuracy requirements; the same trends that also dominate the domestic print production market in United States" (*The market for overseas print providers*, 2006).

Similarly, forces that have been transforming the domestic print industry in the US, such as dependence on Portable Document Format (PDF) as a common file sharing medium, Web-to-print applications for print buying, and online proofing, make the international print buying experience identical to the experience of buying domestically. Another major reason for offshore printing is that some of the printed products are distributed overseas, an effect of globalization (*The market for overseas print providers*, 2006).

### Import/Export Data

Table 1 presents the US Census Bureau data on the top 10 countries from which the US imported printed materials (as of May 2006). Canada used to be the preferred destination for US print buyers to offshore printing; in 2005, the value of imported printed materials from Canada was \$1.69 billion, and China was second with \$1.44 billion. However, the trend changed during the first five months of 2006; the value of imports from China was \$606 million, compared to \$570 million imported from Canada.

**Table 1. General Imports, Custom Value Basis, NAICS 323, 2000-2006 (\$1,000), Not Adjusted for Inflation**

	<b>December 2000 Cum. YTD</b>	<b>December 2001 Cum. YTD</b>	<b>December 2002 Cum. YTD</b>	<b>December 2003 Cum. YTD</b>	<b>December 2004 Cum. YTD</b>	<b>December 2005 Cum. YTD</b>	<b>May 2006 Cum.YTD</b>
China	\$676,858	\$728,647	\$924,093	\$1,122,125	\$1,417,896	\$1,691,646	\$605,986
Canada	\$1,236,965	\$1,253,279	\$1,342,703	\$1,393,307	\$1,421,238	\$1,438,985	\$570,449
Mexico	\$286,149	\$256,128	\$257,672	\$264,597	\$292,179	\$401,994	\$186,511
United Kingdom	\$478,523	\$466,477	\$438,773	\$459,080	\$502,026	\$501,429	\$179,314
Hong Kong	\$300,732	\$301,991	\$291,615	\$259,183	\$260,856	\$246,995	\$79,351
Germany	\$134,509	\$120,391	\$133,705	\$134,835	\$145,481	\$170,758	\$74,307
Italy	\$163,289	\$150,999	\$151,781	\$150,255	\$144,772	\$132,317	\$52,607
Korea	\$79,515	\$88,540	\$92,801	\$98,634	\$111,077	\$129,544	\$51,662
Singapore	\$108,050	\$115,436	\$112,328	\$116,344	\$125,630	\$131,689	\$48,748
Japan	\$149,616	\$102,310	\$101,915	\$94,031	\$95,792	\$97,170	\$37,903

Source: US Bureau of the Census

Table 2 shows the “balance of printing trade” for the top 10 countries from which the US imports printed materials. The US imports \$1.6 billion more print from China than it exports to China. On the other hand, the US exports \$1.2 billion more print to Canada than it does imports.

**Table 2. “Balance of Printing Trade” With Top 10 Print-Exporting Countries, December 2005, Cumulative**

	<b>Imports (Customs Value Based)</b>	<b>Exports (FAS Value Based)</b>	<b>Balance of Printing Trade</b>
China	\$1,691,646	\$81,276	-\$1,610,370
Canada	\$1,438,985	\$2,641,479	\$1,202,494
Mexico	\$401,994	\$568,704	\$166,710
United Kingdom	\$501,429	\$573,828	\$72,399
Hong Kong	\$246,995	\$71,889	-\$175,106
Germany	\$170,758	\$127,130	-\$43,628
Italy	\$132,317	\$42,729	-\$89,588
Korea	\$129,544	\$73,320	-\$56,224
Singapore	\$131,689	\$90,376	-\$41,313
Japan	\$97,170	\$186,727	\$89,557

*Source:* TWGA Analysis of US Census Bureau Data

Between 2000 and 2005, the print trade deficit with China increased by 131%. During the same period, the print trade deficit with Singapore increased by 229%, and that with Korea increased by 515%. Although China gets the major share of the attention, other Asian countries are also involved in providing print solution services to US print buyers (The market for overseas print providers, 2006).

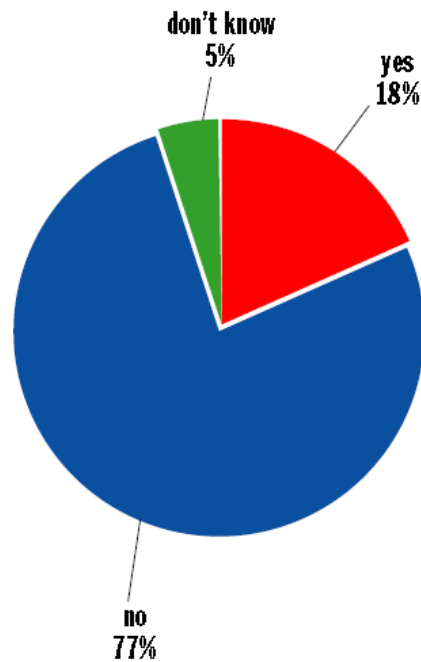


### Who Is Offshoring Print Work?

The US print buyers who offshore print work can be categorized as follows:

- Design and production firms (graphic designers, ad agencies, and commercial photographers)
- Publishers (book, magazine, and catalog publishers)
- Print and prepress providers (commercial, quick, magazine and book printers)

Publishers. Offshoring is becoming popular among publishers who are looking for cost effective, quality printing and other publishing services (Cullen, 2006). From Figure 3, it is clear that 18% of the publishers surveyed had worked with an overseas print provider located outside North America during the past 12 months, while 77% of the respondents had not, and 5% did not know.



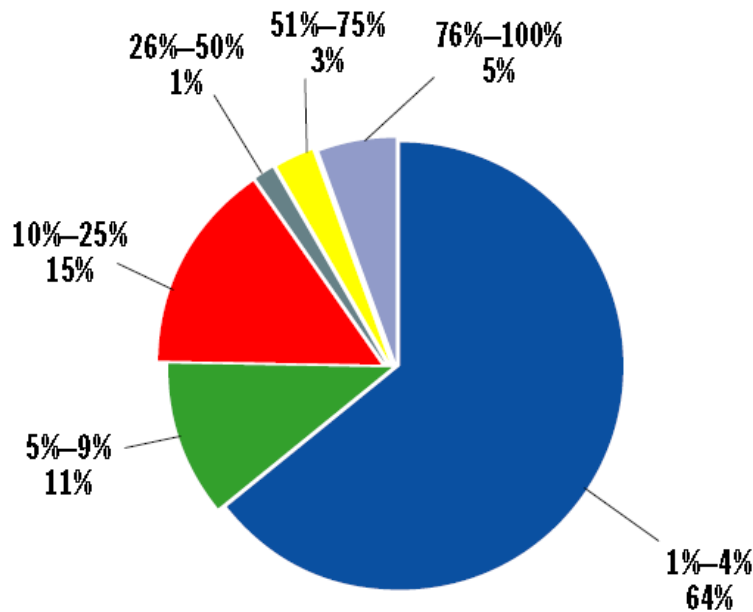
**Figure 3. Has your business worked with a print service provider located outside North America during the past 12 months? All publishing establishments, summer 2006.**

*Source: TWGA Publishing #18, summer 2006*

Book publishers are the major outsourcers among publishers. Forty-two percent of the surveyed book publishers stated that they have worked with an overseas print provider during the past 12 months. Of those publishers who did not currently work with an overseas print provider, only 5% had plans to start during the next 12 months (The market for overseas print providers, 2006).

### How Much Print Work Is Being Offshored?

Publishers. As can be seen in Figure 4, close to 64% of the surveyed publishers who offshored their print work to overseas print providers claimed that the amount of print work they offshored was less than 5% of their total print work, 15% said that the amount of print work they offshored was 15% of their total print work, and 11% claimed that it amounted to 5%-9% of their total print work. The mean percentage of the print work that was being offshored by the publishers was 12.1%, and the median was 3.3%.



**Figure 4. About what percentage of your print work have you sent to an overseas print service provider in the past 12 months? All publishing establishments, summer 2006.**

*Source:* TWGA Publishing #18, summer 2006

More than 68% of the surveyed publishers who were currently offshoring their work to overseas print providers claimed that the amount would remain the same in the near future, 21% of the publishers claimed that they would marginally increase the volume, and 3% said that the amount of offshored print work would increase significantly in the near future (*The market for overseas print providers*, 2006).

#### Reasons for Purchasing Offshore

Cost savings is the primary reason that companies are offshoring printed materials. Outsourcing allows a company to focus more on its strengths and not worry about keeping up-to-date with the latest technology in its non-core areas. The printing industry has been changing from a traditional business model to a digital one. There has been a continuing trend toward performing value-added services to compensate for declining revenues. Obviously, this calls for investing in people, technology, and processes to support new equipment and software. This is where outsourcing plays a dominant role. A major advantage of outsourcing non-core services is that it allows the organization to retain account control. In the current competitive business environment, where firms are resorting to cost control by reducing their supplier base, the more services that can be offered in the same location, the more likely it is for the printer to retain its customers (Sherburne, 2006).

Offshoring enables companies to attain flexibility by achieving their bottom line budget and to enhance their lean production by reducing operating costs, hence increasing profits (Buss, 2005). In 2004, a job that costs \$4,950 In North America would cost \$6,400 in Germany, but it would only cost \$2,245 in China (Mallardi, 2004). Figure 5 compares the cost of different print production processes among different countries. It is quite clear that the printing cost in Asian countries is much lower than in the US and Europe. These savings are mainly due to the lower labor cost and savings from using domestic paper instead of importing paper.

<b>Comparative Component Costs of a Typical Sheetfed Printing Job in Different Places</b>						
Place/ Component	Germany	USA/ Canada	Mexico/ Central America	South America	Southeast Asia	China (PRC)
Paper	26	22	20	18	18	16
Prepress	20	17	16	22	9	7
Press	44	28	22	32	16	8
Postpress	13	10	6	9	7	4
Pack-out	4	2	2	2	4	3
Selling	5	8	5	9	4	2
GenAdmin	7	10	6	9	7	4
<i>Totals</i>	119	97	77	101	65	44

**Figure 5. Comparative cost of a typical sheetfed printing job in different places.**

Source: [http://www.piworld.com/pi\\_premium/282948667378949.bsp](http://www.piworld.com/pi_premium/282948667378949.bsp)

The potential for significant cost savings illustrates the fact that offshoring enables small companies to maintain a streamlined structure, closely manage growth, and spread risks. Thus, offshoring allows businesses to get access to higher paid and more sophisticated jobs without actually incurring additional costs (Buss, 2005).

Chuck Nason, the CEO of Worzalla, a book manufacturing company based in Stevens Point, Wisconsin, points out that his company was affected by globalization. It caused a five-year slide in the company's annual sales from \$62 million to \$44 million. Since China's currency has long been undervalued, the Chinese printers have a 30%-50% advantage on the currency alone. With lower wages, fewer employee benefits, a lack of environmental regulations, and the absence of an agency like the Occupational Safety and Health Administration (OSHA) to ensure plant safety, Asian printers have less overhead to support their pricing (Bauer, 2006).

According to Dr. Joe Webb:

Communications and physical logistics are so good today that geographic proximity is less important than ever. Being close to your customers was never really about geography, anyway. It was about having a shared understanding of goals and objectives, as well as getting things done in the most cost-effective manner today and in the future. (Webb, 2005)

Mid-range sheetfed work that is not time sensitive is the most at risk.

However, according to Vince Naselli, who is a partner at [printforecast.com](http://printforecast.com), even short run jobs may be at risk, as the overseas print provider may ship the initial

required quantity by air and the rest by sea. This results in lower shipping and lower production cost (Bauer, 2006).

## **Barriers to Offshore Printing**

### Time/Turnaround Delays

There are different perspectives on turnaround time. Timing is probably the crucial issue for most companies (McKelvey, 2003). By printing overseas, a customer may have to afford extra time for several rounds of proofing (Tan, 2003). Turnaround time depends on the type of job that is being produced. Normal collateral-type jobs that are shipped via airfreight are produced and delivered in a week or two by overseas printers. More complex jobs like books and catalogs are produced and shipped in six weeks. However, large book printing jobs take from 8 to 12 weeks to be shipped, depending on the amount of prepress and postpress work required. Labor-intensive jobs can be produced quickly, as offshore printers may assign more workers for the project. Offshore printers use their cheap labor to offer low cost, fast turnaround, and graphic design services (Webb, 2005).

### Technology Incompatibility

While digital production, file formats, and hardware have become universal, there are fewer incentives for an offshore printer to adopt the new

technology due to availability of a cheap labor force. For example, use of \$10,000 high-end imaging software might eliminate three positions at a US prepress firm or a print vendor, thus providing a cost benefit incentive to adopt the technology. However, the same software will have to eliminate a far higher number of positions to justify a cost benefit in a country in which the labor costs are much lower. Hence, unless the global marketplace prescribes the use of such technology and standards, offshore printers will continue to choose to leverage low-cost human resources and not adopt such technology (Webb, 2005).

### Language Barrier

Print buyers and production managers who are new to the process of offshore printing face language issues. If an overseas printer has a sales representative whose native language is English, then the problems faced are miniscule. On the other hand, when offshore printers employ service people who speak English as their second language, there may be miscommunication during production. The language barrier is one of the main reasons that overseas print buyers operate through print brokers, who act as a liaison between the print buyer and the overseas print provider (Webb, 2005).

In *Strategies for Management*, Vince Naselli (2005) states:

Not all countries are fluent in English and printing terminology may be different between them. Therefore, translators and print brokers may be needed for communicating a job specification. Any misunderstanding may end up with the wrong job being printed.



However, according to Catalog Age's Margery Weinstein:

Today, communicating with Asian vendors is not a problem. An offshore printing company with a US sales office with a customer sales representative is very common these days. Asian customer service representatives handling North American projects speak English, and they can arrange in-person press checks for print buyers. (2005)

### Time Zone Differences

The differences in time zones of working hours between the print buyer and overseas print provider may cause a lag in communication. It can be frustrating when a US print buyer or production manager needs an immediate response, but the customer service department at the offshore printing company is closed. Many large three-shift overseas plants have a person on staff 24 hours a day to handle calls. Some US production managers and publishing executives may have access to home telephone numbers of representatives of the overseas printer. But in most cases, the only option available is to email and wait for 24 hours for a response (Webb, LiPetri, Papineau, & Naselli, 2005).

### Trust

One of the main issues print buyers have when working with a new overseas printer is trust. It is much easier to visit a US domestic printer to check the progress of the job. However, regular visits to an offshore plant are not possible. This is one of the main reasons that most of the overseas work goes through a print broker who has had experience in managing overseas projects.

Print buyers prefer to have a single point of contact for managing their overseas projects. To overcome this problem, some offshore printing companies have established sales offices in the US in order to bring in more work and monitor the jobs coming into their plants (Webb, LiPetri, Papineau, & Naselli, 2005).

### Proofing Cycles

Obtaining hard copy proofs from an offshore print service provider is a major barrier. In earlier times, obtaining proofs was an expensive process that involved obtaining multiple rounds of approval during the course of the print project. However, the advent of digital proofing has made it much easier for print buyers in the US to work with overseas printers. In fact, digital proofing is one of the main technological factors that have made offshore printing possible and viable. Some of the large offshore printers use high-end digital proofing to cater to large publishers and US corporations. Nevertheless, the most commonly used digital proofing machines are inkjets, specifically Epson desktop proofing systems (Webb, LiPetri, Papineau, & Naselli, 2005).

### Standards

The US uses the English system for measuring, which is different from the international system that is used by most other nations. Print buyers need to be aware of the differences in measuring units while dealing with global print providers. Printing standards are also different between nations. The US follows

Specification for Web Offset Publications (SWOP) standards, while Asian and European countries follow ISO 2846 standards. Since standards specify the ink density level, dot gain level, and so on, customers need to be aware of the printing standard exchange, as different standards may produce different colors (Dick, 2005).

### Political Issues and Cultural Differences

Political issues and cultural differences can lead to catastrophic disasters while dealing with offshore print service providers. Print buyers must consider the impact of domestic and foreign governments' policies before deciding to go forward with offshoring a print job (Hickey, 2005).

## **Overview of the Indian Graphics Industry**

### Introduction

The saga of growth of printing in India began with the arrival of missionaries. The growth in West Bengal when Calcutta was the capital of the British Empire was primarily due to the need to meet the growing demands of the British Raj for its government and administration processes. Although initially the British owned the newspaper presses, later they played more of an active role in the Indian struggle for freedom and independence. The commercial printing presses were set up in Mumbai, Chennai, and Kolkata to meet the needs of the

growing industry. The growth of the Indian printing industry gained momentum after independence.

### Rapid Growth of Indian Print Media

The print industry is one of the fastest growing industries in India. Its growth has consistently outpaced GDP growth. Since 1989, the printing and packaging industries have seen a compound annual growth rate of 14%. The Indian print industry is not only considered a “top priority” industry in India, but it is also one of the major global competitors. It is the world’s fastest growing print industry after that of China.

According to a recent VDMA (German Machinery and Plant Manufacturers Association) study, close to 35% of the Indian print market is related to the packaging industry. The major driver behind this is the consumer goods industry, which includes folding cartons, flexible packaging, and labels. Automation, value-added printing, special effects, and production management are the dominating issues today (Anayath, 2007).

Small- and medium-sized printers are more active in commercial printing. This segment accounts for 18% of the total production and grows at an average of 11% every year. The future of the Indian print industry is bright. According to the 2001 census report, the Indian literacy rate reached 66%. Consequently, the rising educational level will raise the demand for printing and packaging. The

Indian printing industry is expected to grow from its current size of \$2 billion to \$4 billion by 2010.

### Export and Outsourcing

The products that are outsourced are ballot papers, event tickets, package printing, and other customized applications. The government policy is favored in FDI (foreign direct investment) toward different sectors of the print industry. India's major advantage is the availability of an inexpensive and knowledgeable workforce. As globalization takes center stage, brand building becomes imperative for Indian printers. Many printers are making a name for themselves, both in quality and competence (Anayath, 2007).

Pragati Offset Private Ltd. from Hyderabad has won 30 international awards. Recently, the company won the "World's Best Printer" award. In a recent seminar, "Road to Excellence," Mr. Narendra, CEO of Pragati Offset, stated:

Print is growing at 40% but the point to be noted is that the capacity has grown even more. What differentiates a press is excellence. And excellence is what makes one more secure. The US printing industry's size is close to \$200 billion per year with the short run businesses worth around \$30 to 40 billion. Even if a part of this were to come to India it would be very dramatic. (Anayath, 2007)

Indian print providers offer a wide range of services and flexibility in processing a large variety of substrates, inks, and print finishing. There is also a trend toward printing multicolor and special color jobs. The greater chance for growth is with short run jobs that require fast turnaround. State-of-the-art computer to film, computer to plate, and computer to press techniques are

already widespread. More emphasis is being placed on bringing a digital workflow from prepress to postpress. Digital printing is on the rise. Customers' print demands are recently being met with digital printing.

Short run projects and fast turnaround times are more economical with digital printing. The print-on-demand market is predicted to grow by 14% annually. Xerox has sold 10 digital presses in India during the last three years, and HP Indigo has sold 14 digital printing machines during the last 14 months. Digital technology, global competition, market changes, and emerging new media are bound to change the operating environment of the Indian print industry (Anayath, 2007).

#### The Future of the Indian Printing Industry

The total number of graphic arts firms worldwide is about 700,000. There are about 280,000 printing presses installed worldwide. Lithography covers close to 45% of the total presses, gravure and flexo account for 35%, and screen and digital account for the remaining 20%. Although flexo and digital print processes are becoming increasingly popular, lithography will continue to grow in Asian countries (Anayath, 2007).

The future of the Indian printing industry looks bright. Despite the fears of diminishing reading and growth of electronic publishing, the book publishing industry in 2005 produced worldwide a value of \$18 billion. In Frankfurt at a book fair in 2006, India once again enjoyed "*special partner status*" (Anayath, 2007).

The Indian publishing industry is expected to see phenomenal growth in the future, especially in the outsourcing field. According to a recently concluded study by Value Notes Database, the offshoring publishing sector in India will reach \$1.46 billion in 2010, a growth rate of 35%. In addition, the sector is predicted to employ 74,000 people in the next three years (Sachdeva, 2007).

Offshoring publishing revenues in India have grown faster than the number of jobs generated by that sector. The workforce in the sector grew by 31% to reach 26,000 in 2006, while revenues grew by over 45%. Currently, about 100 companies are involved in publishing in India. SPi, Office Tiger, Macmillan India, Newgen, Integra, and Infomedia are some of the major publishing companies. The range of offshore services includes editorial, data operations, design, and IT. According to a study by Value Added Notes, 96% of India-based vendors have the opportunity to cater to the academic publishing segment, while about 40% to 55% have the capability to cater to the educational and legal publishing sector. According to Aradhana Kolhatkar, coauthor of the report published by Value Added Notes, “Interestingly, the bulk of the work will flow to the larger vendors, small vendors will also thrive, helped by subcontracting from larger vendors” (Sachdeva, 2007).

During his recent visit to India, Bernhard Schreier, CEO of Heidelberg Druckmaschinen AG, stated:

By putting all the insights in a nutshell, the historical development, the current situation, the social, industrial and political circumstances, it can be stated without any doubt, that by 2015,

India will be one of the leading printing nations in the world.  
(Anayath, 2007).

## **Overview of the Manufacturing Sector in India**

The significant economic growth of both India and China has laid the path for important policy discussions and analysis. The manufacturing sector in China has contributed to its economic growth, and the IT sector in India has contributed significantly to that country's economic growth. The following segment focuses on the manufacturing sector in India, with core emphasis on factors leading to the sector's success, the factors behind the sector's failures, and recommendations for further improvement.

### **Background**

Although India's IT sector has significantly contributed to economic growth, experts believe that the manufacturing sector will fuel India's growth in the near future. Lack of infrastructure like roads, electricity, seaports, and airports, along with strict government regulation and a high corruption rate, have been the main reasons why multinational companies have not heavily invested in India. In spite of these obstacles, electrical and electronic component manufacturers like Honeywell, ABB, and Siemens, and automotive manufacturers like Toyota Motor have started operations in India. Low labor cost and the presence of highly skilled engineers are the main reasons behind this trend. Close to 50% of US offshoring is manufacturing in skill-intensive areas and



this percentage was predicted to increase to 70% in 2004 (Costa, Rana, Trieu, & Guntupalli, 2006).

However, multinational companies will not be attracted solely by India's economic growth. The nation needs to further improve its basic infrastructure and government policies to attract more FDI.

#### Factors Leading to India's Growth in Manufacturing

Some of the main reasons why China has been more successful than India in the manufacturing sector are its preferential policies, foreign investment, infrastructure investment, and human capital. While factors like low cost of materials, reliable suppliers, and a large domestic market have proved to be an obstacle for the growth of the sector, preferential government policies and human capital have contributed to the new growth in the manufacturing sector.

Preferential Government Policy. Reduction of import and customs duties assisted growth in the manufacturing sector. The government eliminated the duty on raw materials and inputs for the electronics components. The customs duty and duty for inputs for manufacture of automotive components was reduced from 20% to 15%. The Special Economic Zone (SEZ) was formed to assist the government and the private and joint sectors to develop business. It provides high quality support and infrastructure facilities, including the allowance of duty-free import of capital and raw materials (Cost, Rana, Trieu, & Guntupalli, 2006).

Human Capital. The presence of skilled engineers and technical experts in India is abundant. The US and Singapore are the only two countries that have a more skilled workforce than India. India had the lowest labor cost in 2003. It was \$.74 compared to China's \$.90, Thailand's \$1.20, and Mexico's \$1.68. The educational system in India is quite strong, producing 500 PhDs, 200,000 engineers, 300,000 non-engineering postgraduates, and 2,100,000 other graduates every year. The students gain strong managerial ability along with the required technical knowledge and expertise due to a high and intense level of education (Costa, Rana, Trieu, & Guntupalli, 2006).

Large Domestic Market. Growing domestic demand and rising incomes are the main factors that attract foreign investment. Hence, the increase in domestic consumption is propelled by the rising level of incomes. The domestic consumption level was predicted to increase by 8.7% between 2005 and 2006 (EIU, 2006). Although the growing domestic demand entails foreign investments, the nation needs to understand that it is a limited source of growth and focus more on exports in order to truly expand (Costa, Rana, Trieu, & Guntupalli, 2006).

Quality and Trade Standards. Exporting from India has been made possible by the nation's adherence to quality and trade standards that include

ISO 14001, TS 16949, and TQM. Eighty percent of India's automotive manufacturers are ISO 9000 certified and comply with WTO for Trade Related Intellectual Property (TRIPS). Companies setting up operations in India have to adhere to such standards to further expand their growth in the international market (Costa, Rana, Trieu, & Guntupalli, 2006).

### Factors Slowing India's Growth in Manufacturing

Lower Levels of Foreign Investment Than China. Although India's manufacturing sector grew 3% more than the world export market during the first half of the 1990s, China's manufacturing sector grew 57% more than the world export market during the same period. Heavy foreign investment in China (\$40 billion) during the period was the major contributor to the growth. India, on the other hand, received only \$3 billion in foreign investment during the same period. Regulatory quality standards, corruption, and lack of infrastructure were the main obstacles preventing foreign investment.

Doing business in India is significantly more difficult than doing business in China. A report states that it took 89 days to start a business in India in 2004, while it took only 41 days in China. Strict labor laws are also considered a major obstacle to the growth of business. Management teams in Indian companies spend more time addressing regulatory issues (Costa, Rana, Trieu, & Guntupalli, 2006).

Government officials also spend more time on governing regulations like labor laws and tax provisions, which leads to high level of corruption. Finally, the government has also placed a high level of restrictions on FDI inflows as it fears that a high percentage of FDI inflows will have a deteriorating effect on domestic markets.

Lack of Infrastructure. This is considered the biggest obstacle to growth in the manufacturing sector in India. The advantage of having low labor costs is nullified by bottlenecks in power supply, telecommunication, and transportation. For example, Table 3 identifies the huge difference between India and China for three major indicators.

**Table 3. Objective Indicators of Bottlenecks in India and China**

Telecommunication		Power Supply		Transportation	
Number of Days to get a new phone connection		Number of Days to get connected to a public grid		Average Inventory Days of Average Inputs	
India	China	India	China	India	China
29.8	9.3	47.8	25	32.5	24.2

Source: World Bank 2004

Foreign investment is deterred and the cost of business is increased due to the above factors. Frequent power outages, high duties on transporting goods locally, and lack of an interstate system linking key economic zones are the major barriers. The inefficiency in transportation increases the cost of inventory,

which in turn leads to higher operating cost (Costa, Rana, Trieu, & Guntupalli, 2006).

### Recommendations for India's Manufacturing Sector Given China's Success

Given China's success in manufacturing and India's impediments in the same sector, it is quite clear that India needs to increase its FDI inflows and improve its basic infrastructure to expand the growth in the manufacturing sector.

Recommendation 1: Increase FDI Inflows. An increase in FDI inflow will provide more funds to improve the infrastructure that will lead to business development. India needs to liberalize its FDI regulations to facilitate this. Nationalism makes it difficult for the nation to bring in more FDI, as certain political parties are resistant to multinational companies creating a huge impact in the domestic market. FDI inflows also make it easier to enter and exit the Indian market. Hence the nation as a whole must understand the role FDI inflows can play in making India stronger.

Recommendation 2: Improve Infrastructure. Although the government is taking steps to improve infrastructure through the Special Economic Zones, it needs to focus on better access to power and transportation in order to be truly competitive. The country could follow China's lead by developing preferential

treatment for access to power supply and transportation. This will definitely entail more investment (Costa, Rana, Trieu, & Guntupalli, 2006).

## **Summary**

From the preceding discussion, it is clear that China is currently ahead of India in terms of global attraction. But India's heavy investment in education is likely to lead to phenomenal growth in future years. While China is well-known for manufacturing, India has grown in the IT sector. On the other hand, India is also developing its infrastructure to enhance growth in the manufacturing sector.

According to Mr. Regis Delmontagne, former president of the Association for Suppliers of Printing, Publishing, and Converting Technologies (NPES):

India, today, is not merely a target market for products from outside its borders . . . and not just a place foreign customers will turn for less expensive printing. It is also a source of new products, new technologies, and new ideas. . . . The United States remains India's largest trading partner, providing both a market for Indian goods and services and a dependable flow of the latest technologies to help India continue its competitive emergence." (Association for Suppliers of Printing, Publishing, and Converting Technologies, 2005, pg. 1)

India has certain advantages that China does not: rule of law, good communication skills, and a stable banking system. At the same time, it has some disadvantages like its complex bureaucracy, high import tariff rates, and lack of adequate infrastructure. India may not be another US, but it has a potential for tremendous growth (Association for Suppliers of Printing, Publishing, and Converting Technologies, 2006).

According to Capgemini and ProLogis, India will challenge China as the manufacturing center of the world in the next three to five years. The last 15 to 20 years have seen India and China shift from being pure suppliers of raw materials to being important production and service platform providers, as well as growing consumer markets. While China is the preferred offshore destination for manufacturing activities, India is destination of choice for IT, finance, and consumer service activities. However, according to a survey of 340 of the world's largest manufacturing companies—from Europe, the US, and the Asia Pacific region—India will become a substantial manufacturing destination in the next three to five years (Offshore Evolution, 2008).

## **Chapter 3**

### **Research Questions**

Following are the research questions formulated for this thesis:

- Can India be a viable destination for US book publishers to offshore printing?
- What criteria do US book publishers look for when sending jobs overseas (including India)?
- What are the obstacles that prevent US book publishers from buying print from India?
- What are Indian print service providers' perspectives on serving the US print buying markets?



## **Chapter 4**

### **Methodology**

This study applied primary research to fulfill research objectives. The data collection of the primary research was done through two different surveys. One was sent to US book publishers and other was sent to Indian print providers. The main purpose of the surveys was to shed light on the following questions:

- What are the perspectives of the Indian print service providers on serving the US print buying market? Do they see a future in the market?
- What are the barriers preventing Indian print service providers entering the US print buying market on a large scale?
- Do US book publishers consider India a “preferred destination” for offshoring their products? If not, what are the reasons?

The surveys were created online on [surveymonkey.com](https://www.surveymonkey.com).

[Literarymarketplace.com](https://literarymarketplace.com) was used to get the list of book publishers in the US.

Heidelberg India helped the researcher in documenting the survey of Indian print service providers. The links to the surveys, along with a thank-you letter, were sent to the potential respondents via email. The US print buyers’ survey targeted only book publishers in US.

The surveyed book publishers were asked if they were willing to talk more on offshore printing on the phone. A couple of book publishers obliged to the above question in the survey. The summary of the two phone interviews can be found in the analysis and findings section of this study.

**Note**

It was initially decided to survey print buyers in general, including graphic designers, publishers, prepress providers, and so on. But the validity and authenticity of the data obtained from such a survey would have been questionable. Hence, it was decided to focus just on one particular aspect of the print buying industry, namely book publishers. This survey was sent to most of the book publishers in the US.

## **Chapter 5**

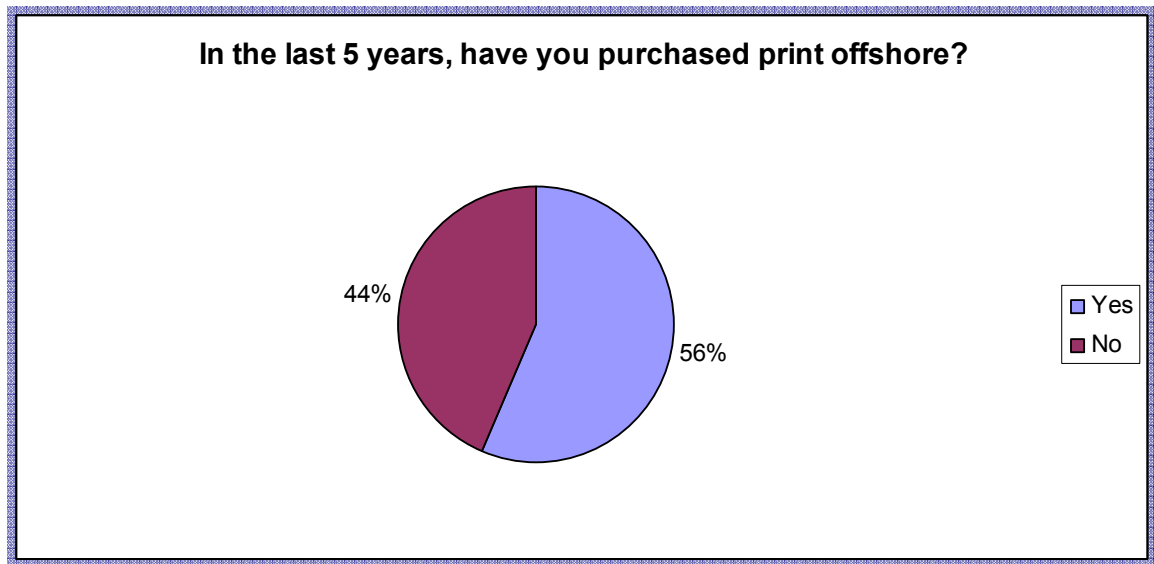
### **The Results**

#### **US Publishers and Offshore Printing**

A total of 500 online surveys were sent to US book publishers, and a total of 104 publishers completed the survey.

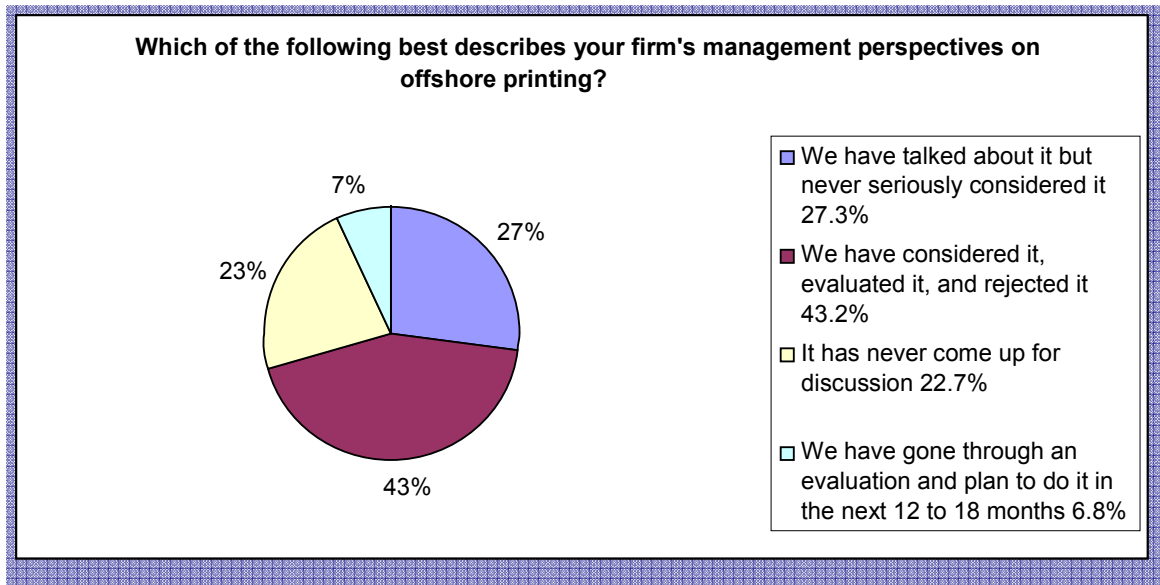
#### **Publishers Who Did Not Offshore**

Among the surveyed book publishers, 56.3% had purchased print offshore during the last five years and 43.7% had not purchased print offshore during the last five years (Figure 6).



**Figure 6. Percentage of US book publishers who have purchased print offshore during the last five years.**

Of the publishers who had not purchased print offshore during the last five years, 27.3% said they had talked about offshoring but never seriously considered it, 43.2% had considered, evaluated, and rejected it, 22.7% stated that it had never come up for discussion, and 6.8% stated that they had gone through an evaluation and planned to offshore their requirements in the next 12 to 18 months (Figure 7).



**Figure 7. Publishing firms' perspectives on offshore printing.**

Turnaround time was one of the most important factors cited by the publishers for not offshoring their print requirements. Many publishers found it hard to control an overseas project, and hence this was rated as the second important barrier for not choosing offshore print service providers. The lack of quality of the products produced by Indian print service providers was the third most important obstacle for not printing their requirements offshore.

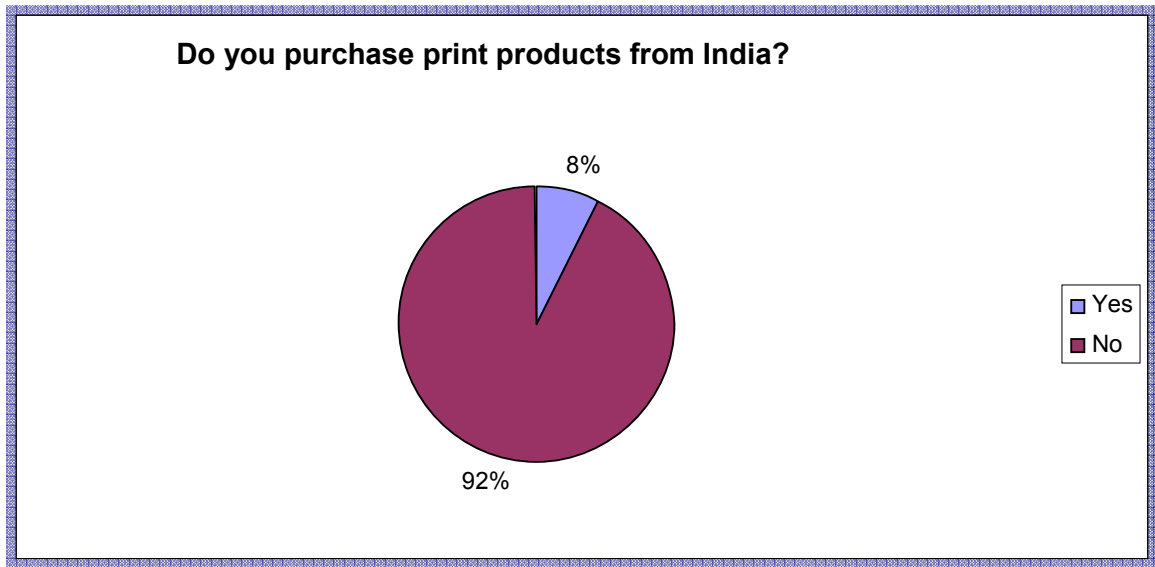
Communication, or lack of communication, was ranked fourth by publishers among their reasons for not choosing offshore printers as preferred destinations. Apart from the factors mentioned above, many publishers also expressed concerns over the political stability of the offshore nation, confidentiality, pricing, and legal aspects that prevented them from offshoring their printing requirements (Table 4).

**Table 4. Reasons Why Book Publishers Do Not Offshore Their Printing Requirements**

If you have not purchased print offshore, please rate the importance of the following reasons? (Please rate all the items)					
Answer Options	Very Important	Important	Somewhat Important	Not Important	Response Count
<b>Turnaround times</b>	24	17	5	0	46
Unattractive pricing	12	14	9	6	41
<b>Hard to control overseas print project</b>	25	12	7	2	46
<b>Quality concerns</b>	25	10	4	6	45
Legal reasons (e.g. Laws that prohibit from buyers from importing from other countries)	4	8	12	18	42
Political reasons	11	8	11	16	46
Concern about confidentiality	12	0	11	21	44
Communication	19	12	9	5	45

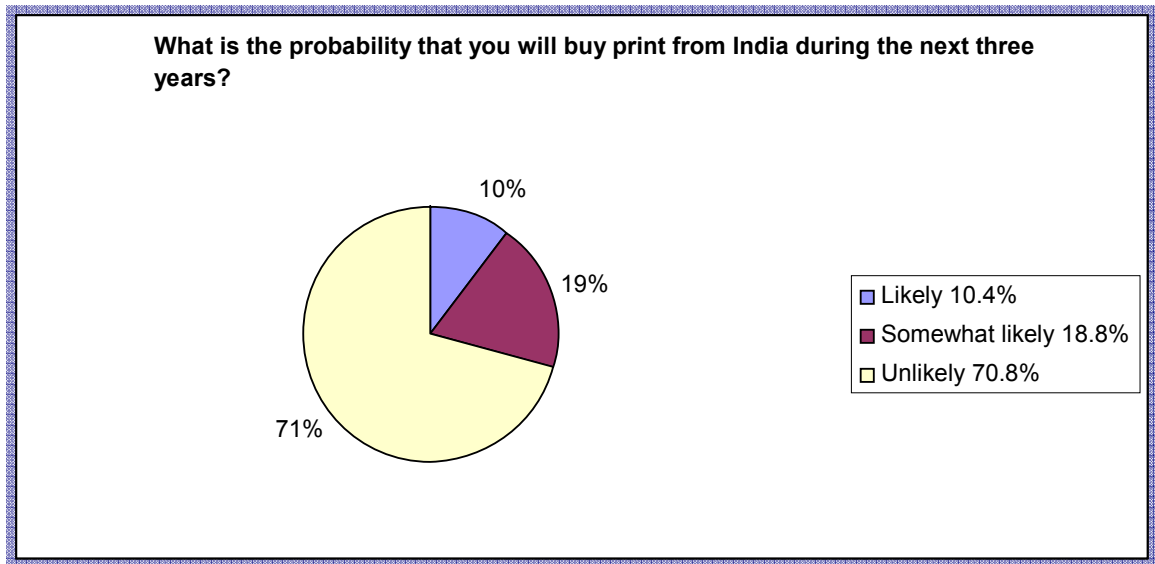
#### Publishers Who Offshored but Did Not Currently Purchase From India

Among the surveyed respondents who offshored, only 7.5% purchased their printing from India, while 92.5% preferred destinations other than India to offshore their requirements (Figure 8).



**Figure 8. Percentage of book publishers who purchase from India.**

Among the book publishers who did not currently offshore their requirements to India, only 10.8% said they were likely to offshore to India during the next three years, while 18.8% stated that were somewhat likely to offshore their printing needs to India during the next three years, and 70.8% said they were highly unlikely to choose India for sourcing their printing needs during the next three years (Figure 9).



**Figure 9. Percentage of US book publishers planning to offshore their printing needs to India during the next three years.**

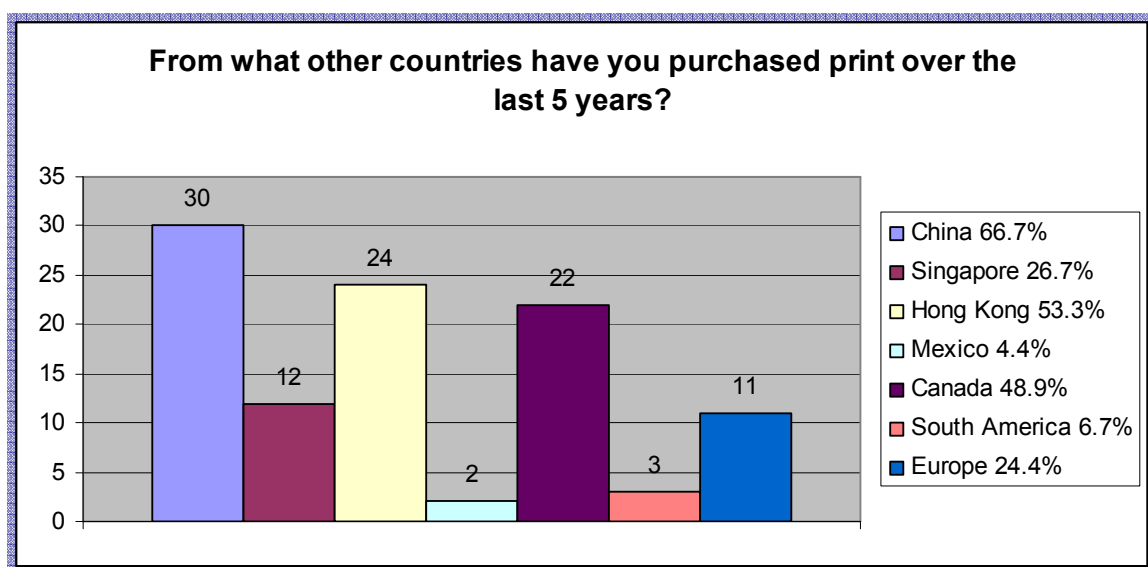
High turnaround time was the most important factor highlighted by the publishers for not sourcing their needs to India. Quality concern was ranked as the second most important reason for not purchasing from India, followed by unattractive pricing. It is also interesting to note that 21 of the 30 publishers who responded to the question stated that legal reasons were not an important reason for not purchasing from India, 19 out of the 32 respondents noted political reasons or stability as not being an important reason for not sourcing their requirements to India, and 17 out of 30 publishers highlighted confidentiality as not being an important reason that prevented them from buying from India (Table 5).



**Table 5. Reasons Why US Book Publishers Do Not Offshore Their Requirements to India**

If you are not planning to purchase print from India, please rate the importance of the following reasons for your decision?(Please rate all items)					
Answer Options	Very Important	Important	Somewhat Important	Not Important	Response Count
<b>Turnaround times</b>	21	5	4	2	32
Unattractive pricing	14	5	4	6	29
Hard to control overseas project	12	7	8	6	33
<b>Quality concerns</b>	22	6	5	3	36
Legal reasons	0	5	4	21	30
Political reasons	4	3	6	19	32
Concern about confidentiality	4	6	3	17	30

Figure 10 illustrates that two-thirds of the US book publishers offshored purchased to China. Fifty-three percent of the US book publishers purchased from Hong Kong, and close to 50% sourced their needs from Canada. Twenty-seven percent used Singapore as a destination for offshoring their requirements, and 24.4% dealt with European print service providers. Some of the other nations used by the US book publishers for outsourcing their requirements were Mexico and South American nations (Figure 10).



**Figure 10. Percentage of US book publishers who offshore their requirements to nations other than India.**

#### Publishers Who Offshored and Purchased From India

Only 4 out of the 56 (7.2%) surveyed publishers who offshored used Indian print service providers to meet their requirements.

Only two out of the four publishers answered the questions that were prepared for publishers who buy from India. Table 6 shows that one of the publishers expected the firm's total printing expenditure purchased from India to increase from 5% in 2006 to 10% in 2007. The other publishing firm expected its total printing expenditure purchased from India to decrease from 70% in 2006 to 50% in 2007.

**Table 6. Percentage of Print Purchased in 2006 Versus Percentage of Print Expected to Be Purchased in 2007 From India**

<b>Publisher</b>	<b>Print purchased from India in 2006 (%)</b>	<b>Expected amount print to be purchased from India in 2007 (%)</b>
A	70	50
B	5	10

Out of the two surveyed publishers who offshored their requirements to India, one of them stated that the typical cost savings on a job purchased from India compared to US pricing is 20%. The other publishing firm said that its typical cost saving ranged from 20% to 40%, with an average of 30% (Table 7).

**Table 7. Percentage of Savings on a Job Purchased From Indian Printers, Compared to Pricing From US Printers**

<b>Publisher</b>	<b>Percentage of savings on job purchased from Indian printers</b>
A	30
B	20

As illustrated in Figure 11, respondents stated that the average processing time from the time the print ready file was submitted until the time the product reached the final destination was 3.5 weeks for US print service providers and 7 weeks for Indian print service providers. There was a difference of 3.5 weeks between US and Indian print service providers. One of the surveyed publishers mentioned that the major delays took place in clearing US customs, where the

security has become tight. For example, the publisher said that it took close to three weeks in the Newark port to clear customs (Figure 11).

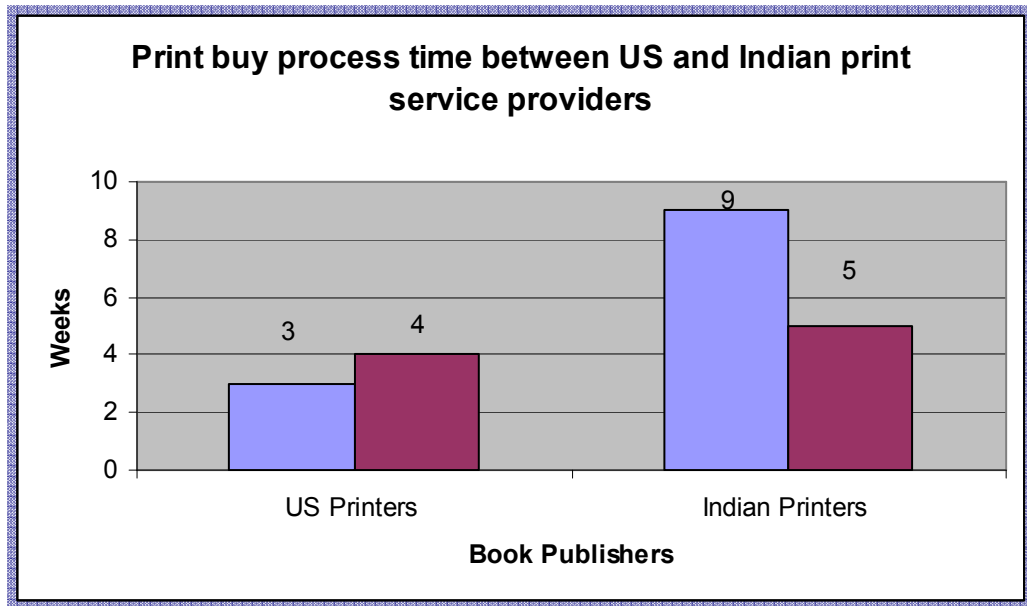


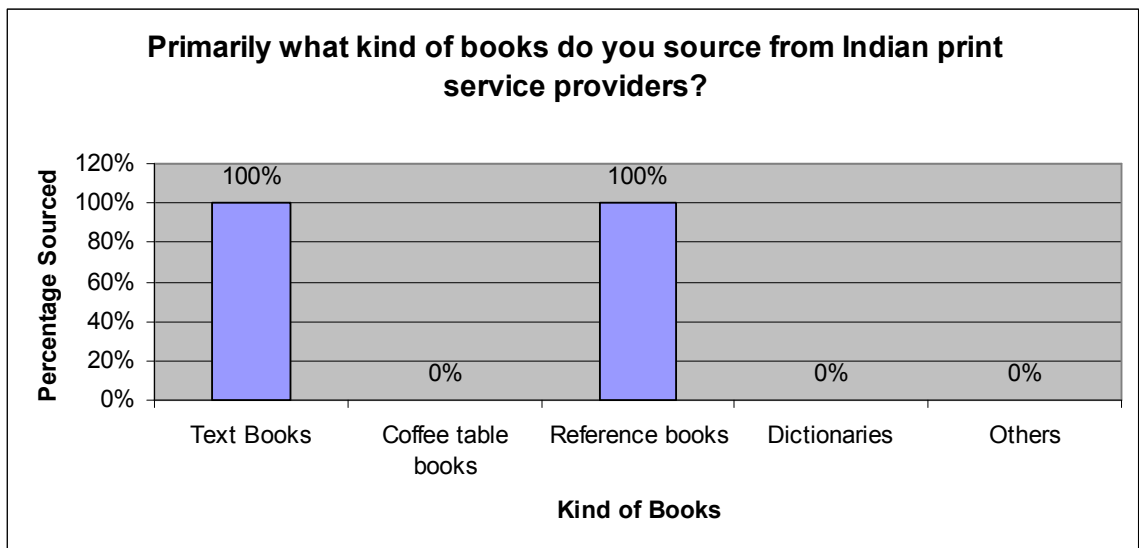
Figure 11. Print buy process time between US and Indian print service providers.

As shown in Table 8, one of the surveyed US book publishers said that the average run length of the jobs the firm purchased from India was 2,500 books. The minimum run length was 1,500 copies and anything below that would not be viable to get printed in India. The publisher also stated that the cost per copy quoted by Indian print service providers decreased as the run length and the book length increased. Hence, they were inversely proportional. The other publishing firm stated that 10,000 copies was the average run length of the jobs the company purchased from India.

**Table 8. Average Run Length of Jobs Purchased From India by US Book Publishers**

<b>Publisher</b>	<b>Average run length of jobs purchased from India by US book publishers</b>
A	2500
B	10000

Both publishing firms surveyed mentioned textbooks and reference books as the kind of products they offshored to Indian print service providers. One of the publishing firms mentioned that the long shelf life of the content of the books was the main reason why the firm chose to offshore textbooks and reference books to Indian print service providers (Figure 12).



**Figure 12. Kinds of books purchased by US book publishers from Indian print service providers.**

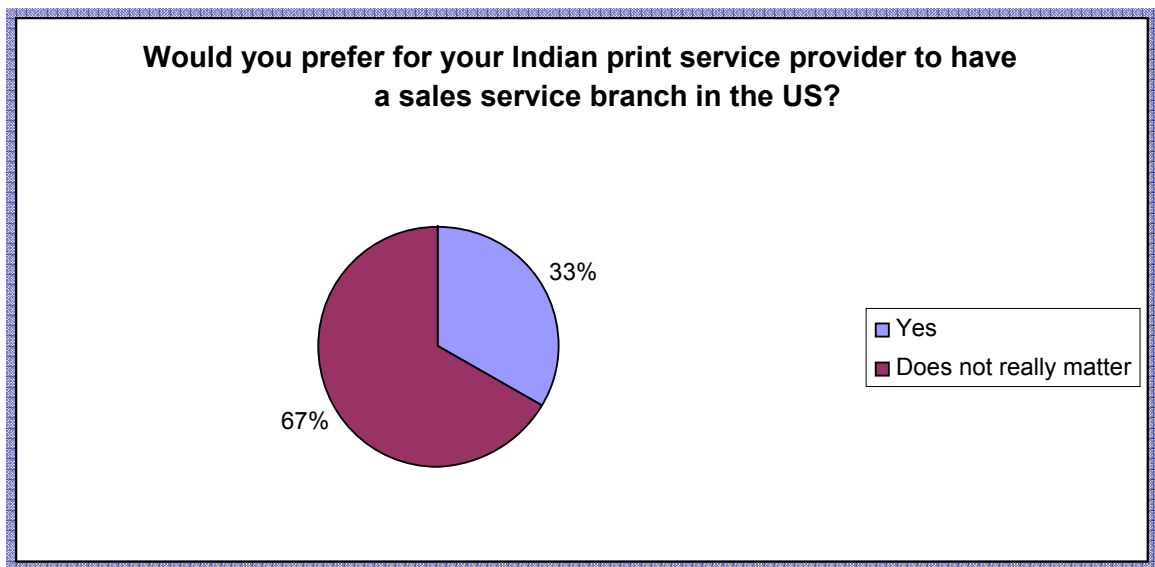
It is interesting to note that both publishing firms that were currently buying from India ranked confidentiality ahead of turnaround time as the most important criterion they used to select Indian print service providers. Both firms mentioned that although turnaround time was an important factor, it was not the prime factor they used to select Indian print service providers. In fact, they ranked technology and infrastructure as the second most important factor they used to select Indian print service providers. Turnaround time was ranked third, followed by the different range of services offered by the Indian print service providers under one roof (Table 9).

**Table 9. Criteria Used by US Book Publishers to Select Indian Print Service Providers**

What criteria do you use to select Indian print service providers? (Please rate based on importance)					
Answer Options	Very Important	Important	Somewhat Important	Not Important	Response Count
Turnaround times	0	2	0	0	2
Technology and infrastructure	1	1	0	0	2
Range of services provided by Indian print service provider(s)	1	0	0	1	2
Political stability	0	1	0	1	2
Confidentiality	2	0	0	0	2
Performance of the entire operation under one roof, right from pre-media till distribution	0	1	1	0	2

Two of three publishing firms that responded to the question stated that it did not really matter whether Indian print service providers had a service branch in the US. One firm said that it preferred Indian print service providers to have a

service branch in the US, mainly for establishing a better communication platform and for operational purposes as it was easier and cheaper for the publishing firm to send the sample hard copies of the books to be printed to the branch in the US rather than to India (Figure 13).



**Figure 13. US book publishers' preference for Indian print service providers having a service branch in the US.**

A total of three of the surveyed US book publishers responded to the question "How do you first learn about Indian print service providers"? Two of them said that they learned about Indian print service providers through the Internet, two stated that they learned about the Indian print service providers through referrals, and one stated that the company used book fairs to connect and network with Indian print service providers. One firm mentioned that it

attends the London Book Fair, the Frankfurt Book Fair, and Book Expo in the US to connect with Indian print service providers.

Many surveyed publishers had some personal opinions and perspectives on offshore printing, sourcing from India and other nations as well.

#### Comments by Publishers Who Did Not Currently Offshore

Which of the following best describes your firm's perspective on offshore printing?

- "We have some mass market print products we are not capable of handling in house and would consider India as a source for production."
- "I have witnessed with other publishers that overseas production in countries where English is not the primary language and quality expectations are low is disastrous."
- "We do use composition services based in India, but not printing as of yet. We're very pleased with the quality and pricing (but especially quality) of the composition of our books."
- "We did some offshore printing in 2001. The model didn't work well for us because we do very short run(s) of a large number of titles (for our size)."



- “We primarily publish time-sensitive materials (books on computer and technology related topics) with B&W interiors. Both of those factors make printing books overseas unattractive. If we move to printing color, we will be forced to move in that direction because of the costs associated with color printing here in the U.S.”
- “We try to print with union shops here and in Canada. There is no way for us to ascertain what the working conditions in Indian print shops are. Nor are we comfortable with the environmental impact of shipping tons of books overseas. If there were a union shop with competitive pricing close to our distributor's warehouse, we'd be printing there.”
- “We are currently considering offshore printing in China and Taiwan, but, because we know of no broker, and because of the low quality of Indian books for India, we haven't pursued Indian book manufacturing.”
- “Feel it is not good for the US if everyone in the US are using outside companies to print materials to sell in the US.”

#### Comments by US Book Publishers on Offshore Printing From India

- “I know very little about 4-color printing in India; we have been happy with Chinese suppliers. Typically we get recommendations for new vendors from colleagues, and I don't know of other university presses working with Indian suppliers. Should that situation change we might consider it.”

- “We, and many other publishers, deal exclusively through an independent print broker who brings us several estimates from firms he feels are appropriate to our type of book.”
- “I am totally unfamiliar with any printing companies in India -- that is the biggest block from using any such companies.”
- “We have working relationships with several composition/publications services companies that are either India-based or are partnered with US companies, so it's not like I'm against doing business there. The feedback I have gotten from other university press production managers regarding printing quality issues make me nervous about sending printing work there.”
- “Have heard from other publishers that Indian printers, in contrast to other Asian printers, are sub par and that transportation within the Indian subcontinent is a major concern re delays in getting products to the port.”
- “We have never printed with them before so we do not know the quality of their work. We are very skeptical about using new printers as we have been burned by bad ones in the past who did not give us quality binding and now we are suffering for it. We are only willing to consider printers at this time that we have worked with in the past and know what their quality is like.”
- “High cost of shipping books from India to US”

- “Actually, the only thing I am concerned about is quality. I'm confident that India could match our other offshore printers on schedule and price.”
- “Concerned about eco-friendly material options (paper and cover) and what's available”
- “Knowledge about Indian printers is very limited”

## **Indian Printers and Offshore Printing**

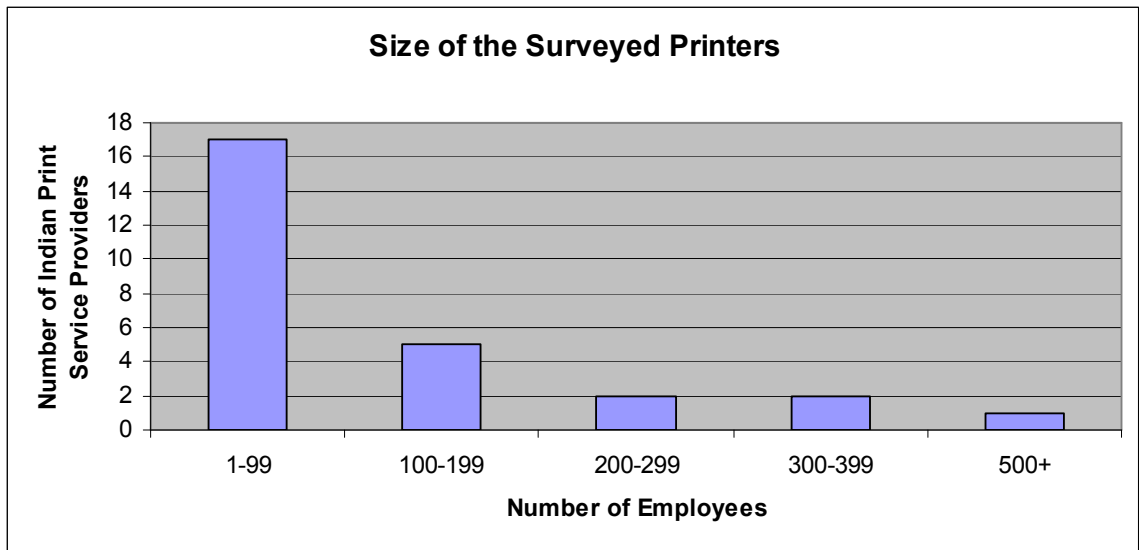
### Brief Overview of the Indian Printing Industry

Four hundred online surveys were sent to Indian print service providers. Twenty-nine surveys were successfully completed. Eight Indian print service providers had been in the business for 21-25 years, six had been in the printing business for over 45 years, and four Indian print service providers had been in business for 0-5 years (Figure 14).



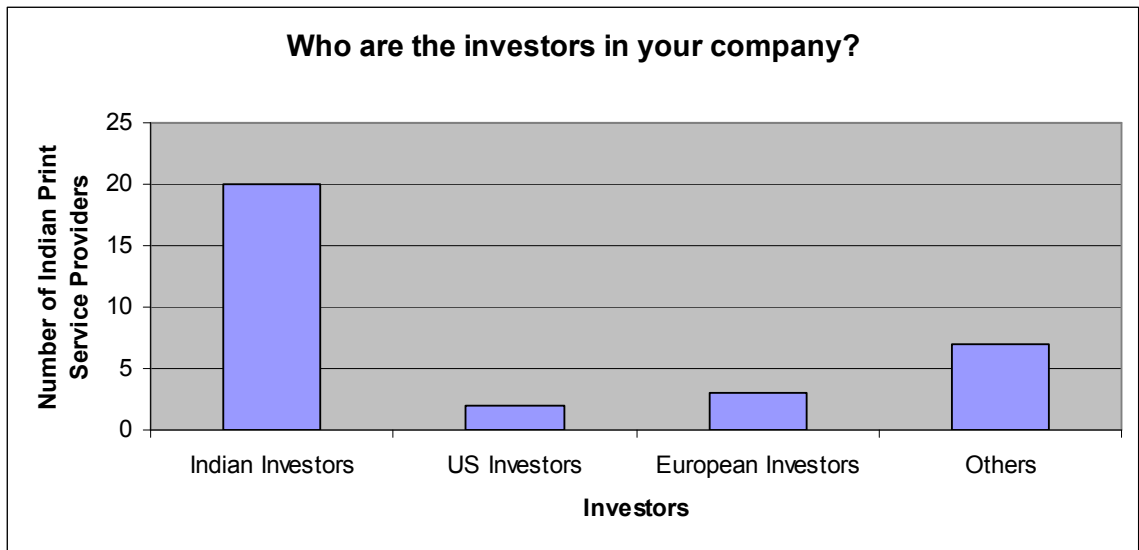
**Figure 14. Number of years the surveyed Indian print service providers have been in business.**

From the survey data, most of the printers were classified as either small- or medium-sized printers. The biggest printer surveyed employed 510 employees, and the average number of employees for each printer was 111 (Figure 15).



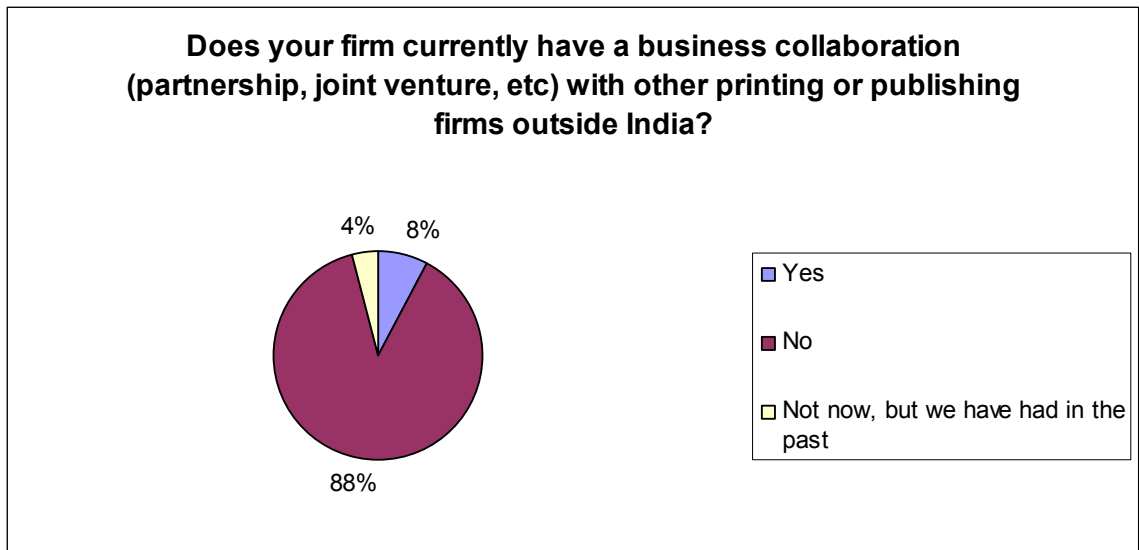
**Figure 15. Size of the surveyed Indian print service providers.**

Among the surveyed Indian print service providers, 20 respondents said that they have Indian investors, 3 stated that they have European investors along with Indian investors, and 2 pointed out that they have US investors coupled with Indian investors. In the “Others” category, some stated that they were family owned business and some mentioned that they were actually looking for foreign investors (Figure 16).



**Figure 16. Investors in the surveyed Indian print service providers.**

When asked the question “Does your printing firm currently have a business collaboration (partnership, joint venture, etc.) with other printing and publishing firms outside India?” 7.7% of the surveyed respondents said yes, 88.5% said no, and 3.8% said that they had had such ventures in the past (Figure 17).



**Figure 17. Firms currently collaborating with other printing or publishing firms outside India.**

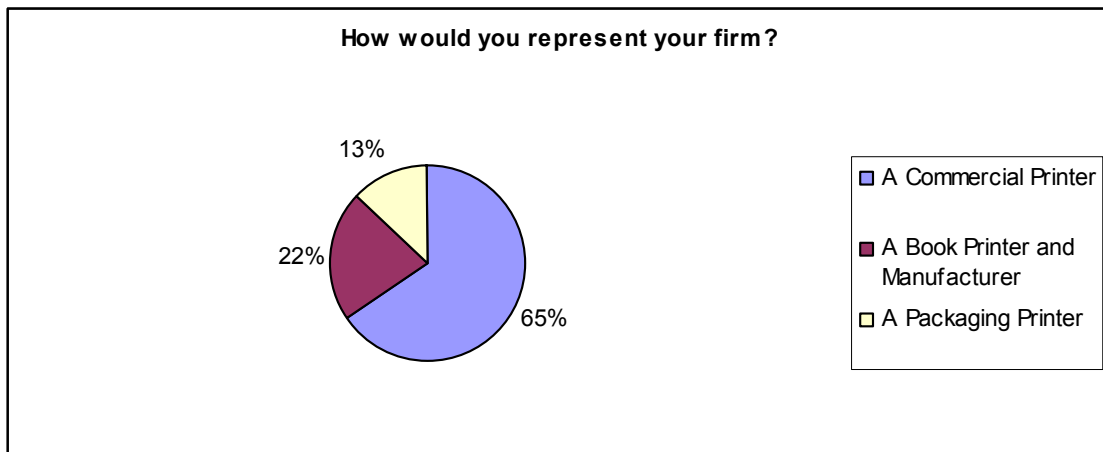
All the surveyed Indian print service providers were looking forward to a positive and profitable financial year for 2007. All the respondents predicted an increase in their sales from 2006. Two Indian print service providers reported an expected increase in excess of 100%, and the average expected increase in sales was 39% (Table 10).

**Table 10. Comparison Between Sales Turnover in 2006 and Expected Sales in 2007 of the Indian Print Service Providers (in Indian Rupees)**

<b>Sales in 2006 (In Million/INR)</b>	<b>Sales in 2007 (In Million INR)</b>	<b>Percentage Increase or Decrease in Sales</b>
180	250	38.89
60	70	16.67
140	300	114.29
200	225	12.50
6	10	66.67
4	5	25.00
35	45	28.57
15	20	33.33
3.5	4.5	28.57
136	208	52.94
0.75	0.89	18.67
80	90	12.50
55	75	36.36
2.75	3	9.09
720	820	13.89
150	300	100.00
2.5	4	60.00
100	150	50.00
30	50	66.67
15	25	66.67
150	180	20.00
20.05	21	4.74
45	55	22.22

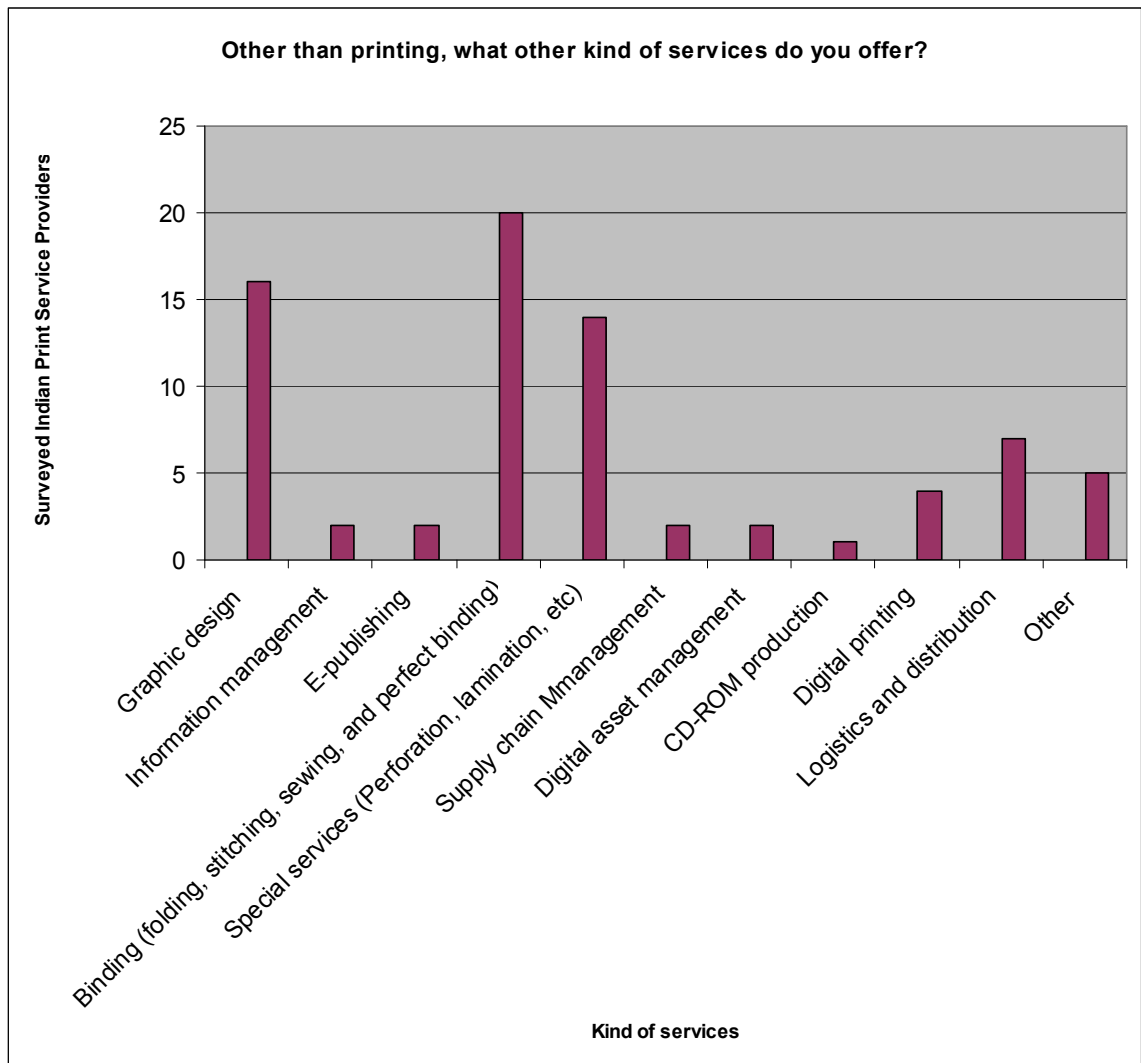
Of the surveyed respondents, 65.2% claimed to be commercial printers, 21.7% classified themselves as book printers and manufacturers, and 13% stated that they were package printers (Figure 18).





**Figure 18. Types of Indian printing firms.**

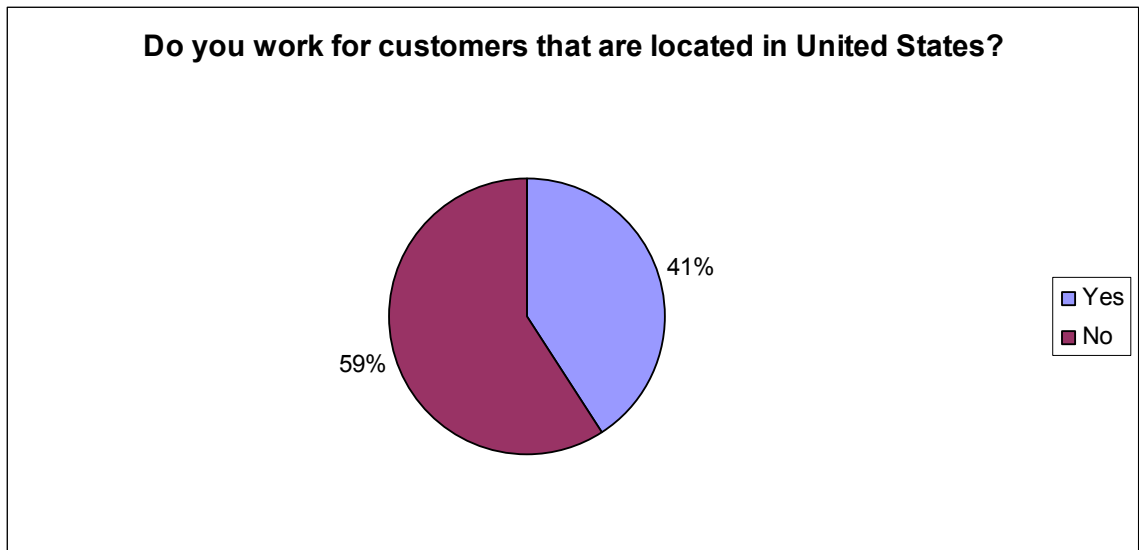
Among the different kind of services offered by the Indian print service providers other than printing, binding (chosen by 20 respondents) seems to be the most popular service offered by the Indian print service providers. This is followed by graphic design services (chosen by 16) and special services like perforation and lamination (chosen by 14) (Figure 19).



**Figure 19. Other services offered by Indian print service providers.**

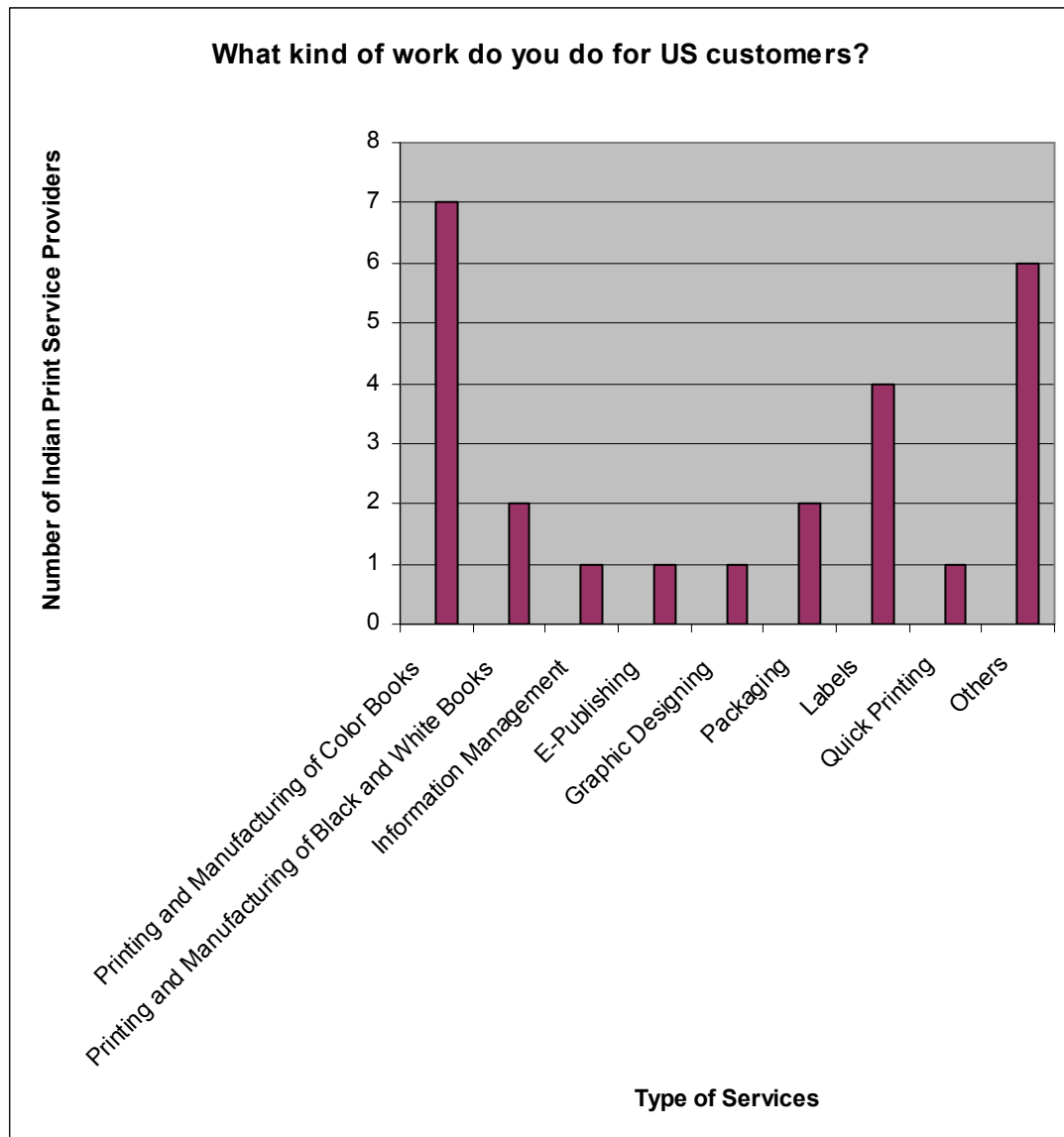
#### Indian Print Service Providers Who Offer Services to US Print Buyers

Of the surveyed respondents, 40.7% said that they worked for customers located in the US, and 59.3% stated that they did not work for customers located in the US (Figure 20).



**Figure 20. Percentage of Indian print service providers who work for customers located in the US against those who do not.**

Based on the survey responses, printing and manufacturing of color books seems to be the most popular service offered by the Indian print service providers to US customers. This is followed by label printing. It is also interesting to note that while printing of color books for US customers seems to be popular among Indian print service providers, printing of black and white books is not that popular among Indian print service providers (Figure 21).



**Figure 21. Services offered by Indian print service providers for US customers.**

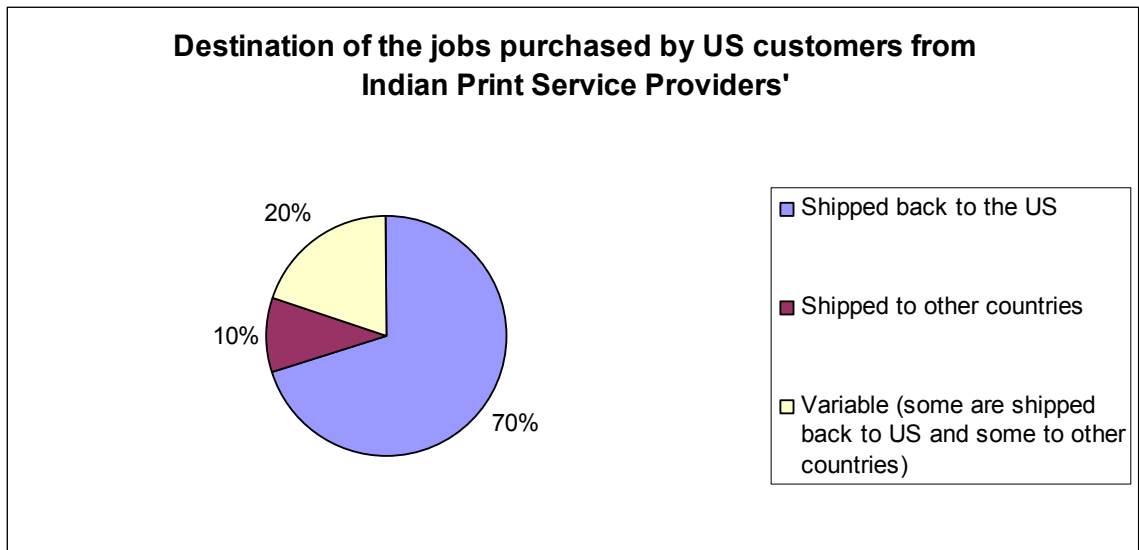
Most of the surveyed Indian print service providers who offered services to US customers expected their revenue from US customers to increase in 2007. Only two of the seven respondents expected their revenue from US customers to be the same in 2007. One of the Indian print service providers predicted a

substantial increase from 10% to 45% of revenue from US customers in 2007 (Table 11).

**Table 11. Comparison Between Indian Print Service Providers' Expected Revenue From US Print Buyers in 2007 and Their Revenue in 2006**

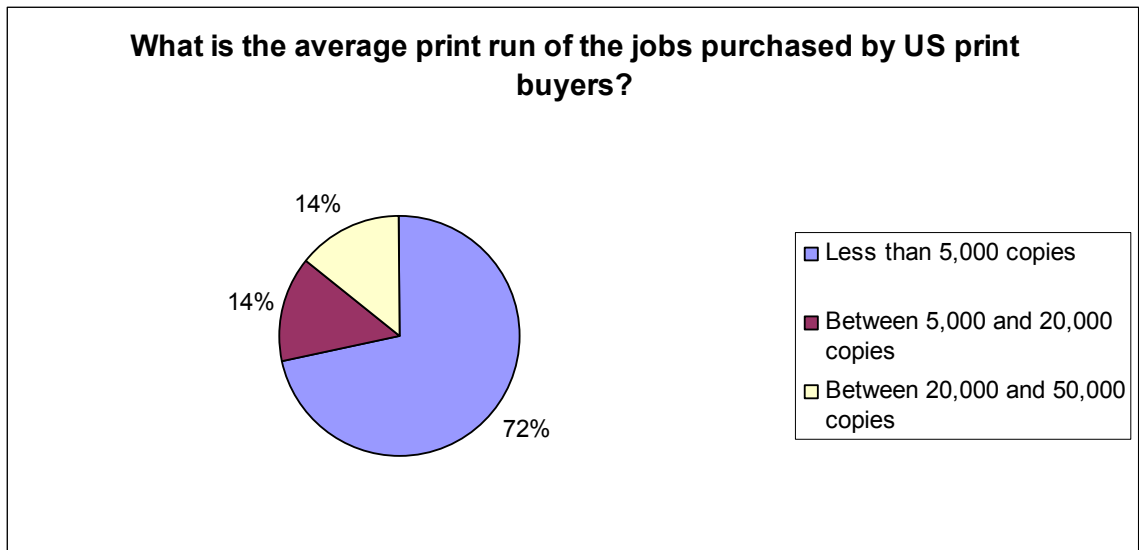
<b>Printer</b>	<b>Revenue from US Clients in 2006 (%)</b>	<b>Expected revenue from US clients in 2007 (%)</b>
A	10	45
B	5	7
C	20	20
D	5	5
E	10	12
F	12	15
G	5	10

Seventy percent of the surveyed Indian print service providers that offered services to US customers stated that the jobs purchased by US print buyers are shipped back to the US, 10% said that the jobs are shipped to other countries, and 20% stated that some jobs are shipped back to the US and some to other countries (Figure 22).



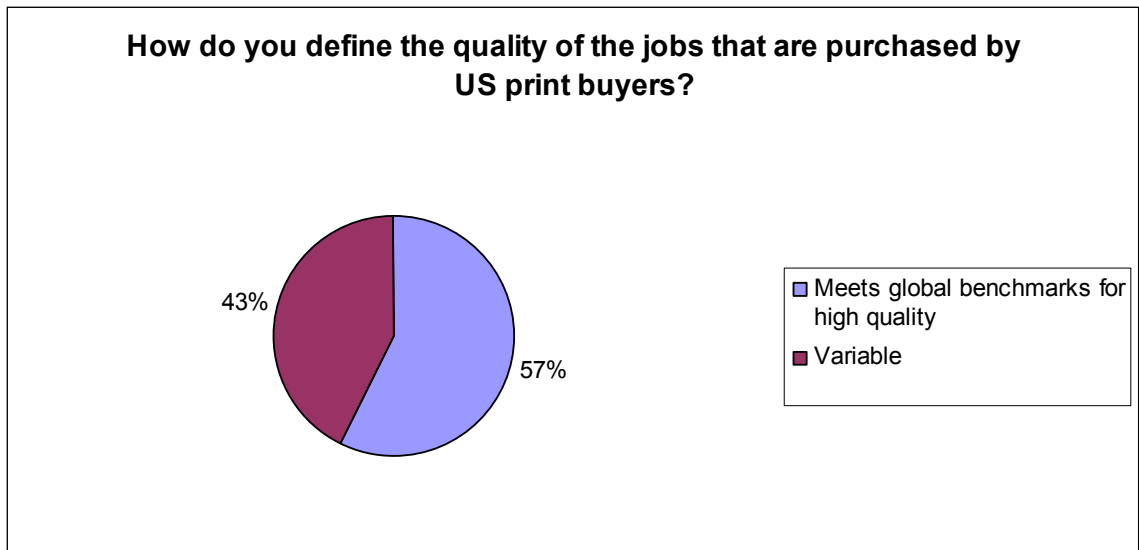
**Figure 22. Final destination of jobs purchased by US print buyers from Indian print service providers.**

As shown in Figure 23, 72% of the surveyed Indian print service providers stated that the average run length of jobs purchased by US customers was less than 5,000 copies. Fourteen percent said that the average run length was between 5,000 and 20,000 copies, and 14% claimed the average run length to be between 20,000 and 50,000 copies. It is interesting to note that none of the Indian print service providers that offered services to US customers claimed the run length of the jobs to be more than 50,000 copies (Figure 23).



**Figure 23. Average run length of jobs purchased by US customers from Indian print service providers.**

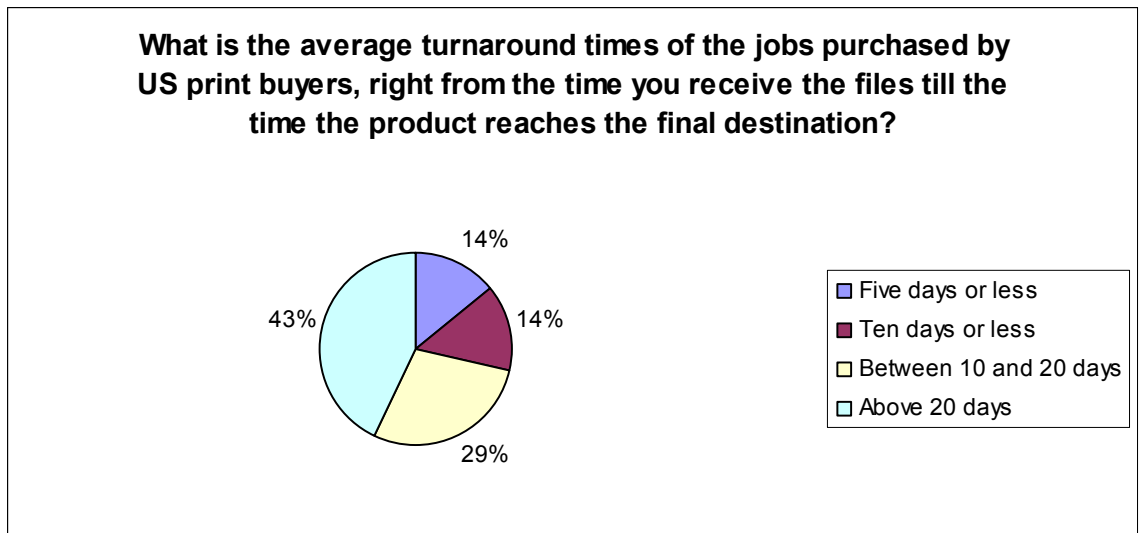
Fifty-seven percent of the Indian print service providers from whom US print buyers purchased jobs thought that the quality level of the jobs met global benchmarks for high quality, while 43% thought it was variable (i.e., some of the jobs met global standards while some did not) (Figure 24).



**Figure 24. Indian print service providers' perception of the quality level of jobs purchased by US print buyers.**

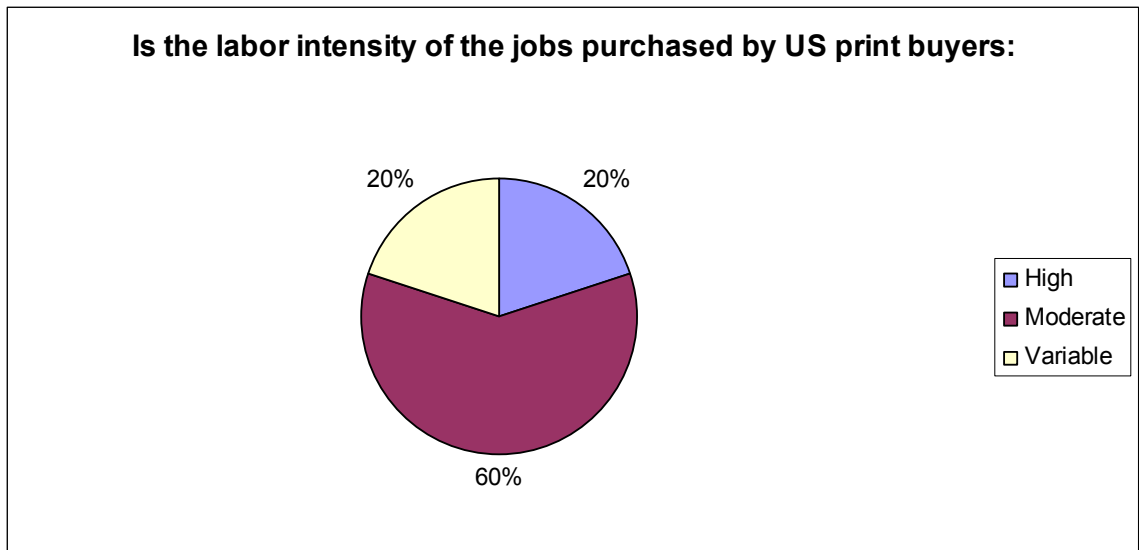
Forty-three percent of the surveyed respondents stated that the turnaround time of the jobs purchased by US print buyers was above 20 days, 29% said that it was between 10 and 20 days, and 14% stated the turnaround times to be between 5 and 10 days (Figure 25).





**Figure 25. Average turnaround times of jobs purchased by US print buyers.**

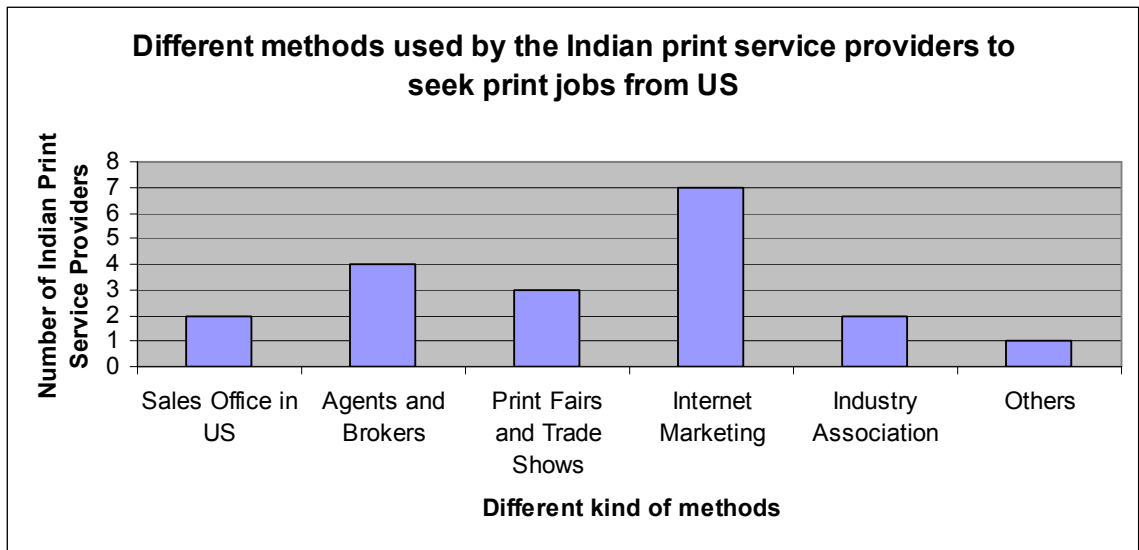
A majority of the surveyed Indian print service providers (60%) seemed to think that the labor intensity of the jobs purchased by US print buyers was moderate. Twenty percent claimed the labor intensity level was high, and 20% percent stated that it varied from job to job. It is interesting to note that none of the Indian print service providers considered the jobs provided by US customers to involve a high level of automation (Figure 26).



**Figure 26. Labor intensity level of the jobs purchased by US print buyers.**

#### Indian Print Service Providers Who Do Not Offer Services to US Print Buyers

Based on the survey data, 59% of the Indian print service providers did not offer their services to US print buyers. Moreover, 66.7% of the Indian print service providers who did not offer services to US print buyers were actively seeking jobs from the US. Internet marketing seemed to be the most popular method used by the Indian print service providers to seek jobs from the US. Some of the Indian print service providers (four) went through agents and brokers to network and make contacts with US print buyers (Figure 27).



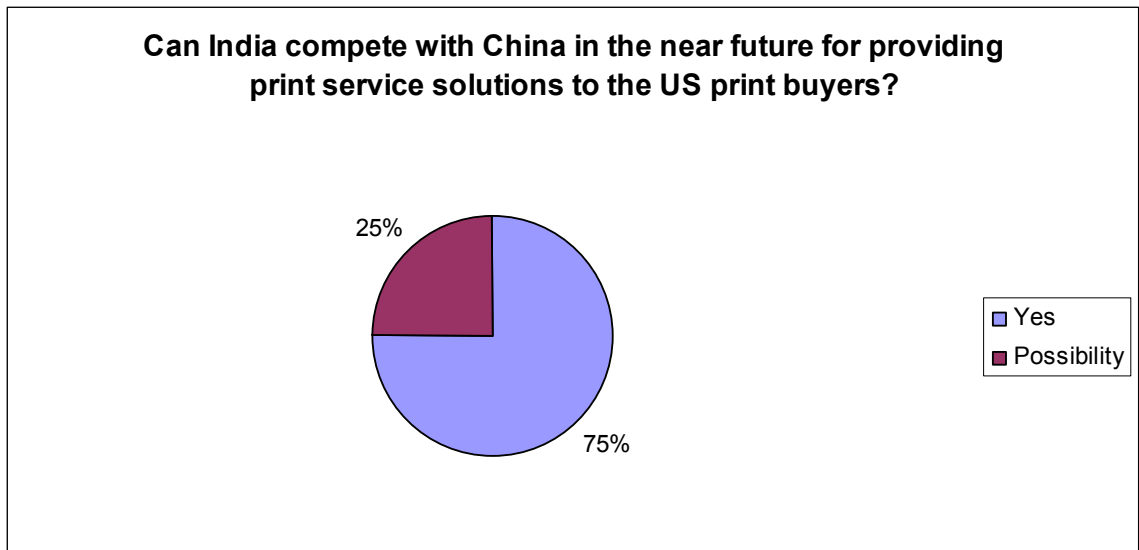
**Figure 27. Methods used by Indian print service providers to seek print jobs from the US.**

Logistics and shipping and turnaround times seemed to be the major barriers that were inhibiting the growth of the Indian print service providers in the US print buying market. Some Indian print service providers stated that the jobs purchased by US print buyers were not profitable, and some claimed that they were unable to meet the quality expectations of US print buyers. It is interesting to note that the book publishers who did not offshore to India seemed to point out the same reasons highlighted by the Indian print service providers that inhibited the growth of the Indian printing firms in the US print buying market (Table 12).

**Table 12. Barriers Inhibiting the Growth of Indian Printing Firms in the US Print Buying Market**

Rate the importance of the barriers that are inhibiting your growth in the US market? (Please rate all items)					
Answer Options	Very Important	Important	Somewhat Important	Not Important	Response Count
Logistics and shipping	5	5	3	0	13
Turnaround times	3	10	1	0	14
Unable to meet the price expectation	2	5	4	3	14
Unprofitable jobs	1	4	4	3	12
Unable to meet the quality requirements	3	0	8	1	12
Requires huge capital investment and technology up gradation	5	2	2	2	11
Political pressure	0	4	2	5	11
Legal reasons	2	4	2	3	11

The following general question was posed to all the surveyed respondents, “Do you see the Indian print service providers competing with China in the near future for providing print service solutions to the US print buyers?” Seventy-five percent of the Indian print service providers were confident that they would be able to compete with China in the near future for providing print solution services to the US print buying market, while 25% thought that it was a possibility (Figure 28).



**Figure 28. Can India compete with China in providing print service solutions to US print buyers?**

## **Chapter 5**

### **Analysis and Findings**

The main objective of this study was to begin to address the following questions:

- What are the main barriers inhibiting the growth of work done by Indian print service providers for the US print buying market?

This question was asked of both US book publishers and the Indian print service providers. According to the book publishers, high turnaround times and lack of quality in the final output seemed to be the major concerns. Twenty-one of the surveyed book publishers who purchased printing offshore but not from India highlighted turnaround times as being the most important factor for not dealing with Indian print service providers. Twenty-two of the surveyed book publishers who purchased printing offshore but not from India claimed that they were not happy with the quality of the products produced by Indian print service providers. Close to 50% of the respondents to the question also seemed to be unhappy with the prices offered by Indian print service providers.

According to the Indian print service providers, logistics and shipping and turnaround times seemed to be the major obstacles. Their inability to meet the quality requirements and the requirement for a large investment in capital infrastructure also seemed to play a vital role in preventing the Indian print service providers from entering the US market in a significant way. It is interesting to note that while 21 of the 29 US book publishers who offshored but not from India were unhappy with the pricing offered by Indian print service providers, only 2 out of the 14 surveyed Indian print service providers who did not offer their services to US book publishers seemed to consider pricing a major barrier. This indicates a possible gap in perception of Indian print service providers and the expectations of their potential US customers.

The Indian print service providers also seemed to have a misperception about the quality requirements of their potential US customers. As 22 of the 36 (61%) book publishers who offshored but not from India were highly concerned about the quality of the products produced by Indian print service providers, only 3 out of the 12 responding (25%) Indian print service providers considered quality a major obstacle to their growth in the US print buying market. The Indian print service providers may be underestimating the importance of quality to American print buyers.

**Table 13. Obstacles Inhibiting the Growth of Indian Print Service Providers in US Print Buying (Book Publishing Market)**

Factors	USA book "publishers" perspective				Indian print service "providers" perspective		
	Very Important	Important	Response Count		Very Important	Important	Response Count
Turnaround times	21	5	32		3	10	14
Quality concerns	22	6	36		3	0	12
Pricing	14	5	29		2	5	14
Logistics and shipping					5	5	13
Unable to control overseas projects	12	7	33				
Legal reasons	0	5	30		2	4	11
Political reasons	4	3	32		0	4	11
Confidentiality	4	6	30				
Unprofitable jobs					1	4	12
Requires huge capital investment					5	2	11

- What are the perspectives of Indian print service providers on serving the US print buying market? Do they see a future in it?

Of the surveyed Indian print service providers, close to 41% offered their services to the US print buying market. Printing and manufacturing of color books seemed to be the most popular service offered by the Indian print service providers to US print buyers. Seventy percent of the jobs purchased by US print buyers were shipped back to the US. Seventy-two percent of the jobs purchased had an average run length of less than 5,000 copies.

A majority of the surveyed Indian print service providers believed they were meeting the quality expectations of the jobs purchased by US print buyers. Fifty-seven percent of the surveyed population claimed that the jobs purchased by US print buyers met global benchmarks for quality. However, one of the Indian



print service providers who was currently dealing with US print buyers had this to say, “The clients’ knowledge about the job requirements are not up to the mark. This is similar to the problem we face with clients from India too. E.g. Bad quality inputs, artworks in wrong software, etc.” This probably highlights the importance of establishing a common platform (language) for communication between the print buyers and print service providers. This is where JDF (Job Definition Format) can go a long way in solving the miscommunication problems between print buyers and print service providers.

Forty-three percent of the surveyed Indian print service providers who currently offered services to US print buyers claimed the average turnaround times from the time the print file was submitted until the time the product reached the final destination was more than 20 days. When the same question was asked of the US book publishers, they claimed the average turnaround time was around seven weeks. However, they also mentioned that the delay did not take place in printing or manufacturing, but in logistics, especially in the US shipment and logistics centers where it can take close to two to three weeks to clear the goods due the increased level of security. One of the Indian print service providers had the following to say about logistics and turnaround times: “For quick supply, the first few copies to meet the urgency can be sent by airfreight and the balance by sea-freight.”

Most of the Indian print service providers who currently offered services to US print buyers expected an increase in revenue in 2007. Only two of the seven

respondents expected their revenue from US customers to be the same in 2007.

One of the Indian print service providers predicted a substantial increase from 10% to 45% of revenue from US customers in 2007. Fifty-nine percent of the Indian print service providers who did not currently offer services to US print buyers claimed that they were actively seeking jobs from US print buyers.

Internet marketing seemed to be the most popular method used by the Indian print service providers to seek jobs from the US. Some of the Indian print service providers (four) went through agents and brokers to network and make contacts with US print buyers.

Seventy-five percent of the surveyed Indian print service providers claimed that India could compete with China in the near future for providing print solution services to the US print buying market. Hence, it is quite clear that the Indian print service providers see a definite future for themselves in the US print buying market.

- Do book publishers consider India a preferred destination for sourcing their printing requirements?

The book publishers seemed to have a mixed opinion about sourcing their needs from India. Among the publishers who did not currently purchase services from India, 30% of them mentioned that they were somewhat likely or likely to buy from India during the next three years. The publishers who were currently

purchasing from India claimed that they would buy more during the coming years. One of the publishers mentioned that the company's total printing expenditure purchased from India would increase from 5% to 10% in 2007.

Two phone interviews from the surveyed respondents were conducted to get more information on the publishers' perspective in purchasing their print requirements from India. The summaries of both the phone interviews follow.

### **Interview 1**

One of the publishers who currently purchased from India claimed that the company's printing expenditure on buying from India would shrink from 70% in 2006 to 50% in 2007. During the phone interview, the interviewee provided more information. The publisher claimed that the reduction was explained by a change in their business model that would entail selling more computer science books with a short shelf life, which they could afford to offshore. The publisher further claimed that the company's overall revenue and sales would increase the following year and that sales from India the following year would not decrease—and in fact would probably increase—but that the time-sensitive computer books would be printed in the US due to time constraints. The firm claimed that it had a cost benefit of 20%-40% by sourcing its needs to India.

The publisher claimed that the firm would look at technology more on the pre-media side, and if it was sourcing color books then the firm would look for state-of-the-art printing and binding machines at the supplier's end. The

respondent also mentioned that he would prefer that Indian print service providers open up a service branch in the US, which would facilitate a better communication platform. Book fairs like the ones held in London and Frankfurt were the primary means used by the publisher to locate Indian print service providers. Finally, he claimed that his experience working with Indian print providers thus far has been good and that he was looking forward to working with them in the future.

## **Interview 2**

One of the book publishers who claimed he was likely to purchase print from India over the next three years had some interesting information to share during the phone interview. The firm mentioned that Indian print service providers were more likely to print color books but would also be interested in printing commercial sheet fed jobs should an opportunity arise. The firm spent the bulk of its money on printing color books offshore. The firm found it viable and much cheaper to print color books offshore. The publishing firm's average print run that was offshored was 8,000 to 10,000 copies, and the average cost savings was between 40% and 60%.

When asked about the turnaround times for jobs offshored to India, he mentioned that he had yet to deal with Indian print service providers, but predicted an average turnaround time of five to six weeks. The publisher was also not too worried about the security delays in US ports as the company

scheduled jobs in such a way that they had sufficient time to receive the final product. Moreover, if required, they would airfreight the required quantity and ship the remainder by sea.

The publisher also mentioned that he went through brokers and sales offices in the US to locate print service providers in India and other offshore destinations. He mentioned that it is part of the publisher's job to receive inquiries from various offshore printers and to decide on the best one(s) after weighing the options. The publishing firm was not too keen on observing the export benefits offered to the offshore destination by the concerned government, but would refrain from dealing with printers located in nations suffering from political and legal instability.

The firm is currently looking at India as a whole for sourcing its offshore requirements, and was not inclined toward selecting printers from a particular portion of the country. When asked the reasons for the firm's preference to deal with China over India for sourcing its needs, the contact person mentioned that he had read a lot about India being a famous destination for providing prepress work and did not until recently consider India as a potential manufacturer of books and other related products. Finally, he mentioned that he was also looking at offshoring design work, which was the most expensive part of the process, and would encourage offshore print service providers to market such services.

Among the publishers who did not currently offshore from India, 70% of them mentioned that it was unlikely that they would buy print from India during

the next three years. Some of them had some special comments to support their decision not to buy from India during the next three years. It is quite clear from the comments that Indian print service providers are not well-known in the US book publishing market. Many of the book publishers were not aware of the existence and the capabilities of Indian print service providers.

Some thought of Indian print service providers as being more involved in the design, pre-media, and composition process of printing and were unaware of their manufacturing capabilities. Some publishers who had actually done business with Indian print service providers in the past were unhappy with the quality of the service provided and hence decided against sourcing their print requirements from India in the future.

While it is quite safe to say that there is definitely a potential for Indian print service providers to offer services to US book publishers, they need to pursue aggressive marketing and introduce better systems to meet the quality expectations of US book publishers. Having a sales office in the US and participating in the major book publishing fairs held in London, Frankfurt, and New York might be a way to market their products as this would facilitate a platform to exhibit the products they have manufactured and broadcast their printing and manufacturing capabilities to US book publishers.

## **Chapter 6**

### **Summary, Conclusion, and Recommendations**

#### **Summary**

Offshore printing is one of the most controversial issues in today's US printing industry. Some interesting conclusions can be drawn from the data received. These conclusions are drawn based on the assumption that a small sample is a meaningful representation of the demographic. Indian print service providers seem to be positive about their potential opportunities in the US print buying market. Most of the Indian print service providers offering services to US print buyers expected their revenue from US customers to increase in 2007.

From the data, it is evident that China currently is the preferred destination of US book publishers for sourcing their printing requirements, but India has the potential to compete with China in providing print solution services to the US print buying market. The Indian print service providers agreed upon this view, as 75% of the surveyed Indian print service providers were confident that India could compete with China in providing print solution services to the US print buying market and the remaining 25% thought that it was a possibility.

However, some barriers are currently inhibiting the growth of Indian print service providers in the US print buying market. From the data received, it is

quite apparent that the book publishers are concerned about the quality of the products manufactured by Indian print service providers, the turnaround times, and confidentiality. Moreover, many publishers mentioned that they were not aware of the existence and capabilities of Indian print service providers.

With regard to turnaround times being a barrier, one of the print service providers who did currently offshore work for US customers mentioned that US customers were prepared to airfreight the quantity they required immediately and ship the remainder by sea freight. On the other hand, one of the book publishers who was currently buying from India mentioned that he would shy away from sourcing print products from India that have a short shelf life mainly because of the turnaround time it takes for the product to reach the final destination.

One of the Indian print service providers named Multivista Global Ltd. ([www.multivistaglobal.com](http://www.multivistaglobal.com)) located in Chennai (India) provided the following details about the sea freight shipment times from the port of Chennai, which is located in the southern part of India.

**Table 14. Transit Time ExChennai (Sea Freight)**

Destination	Direct Service Availability	Transit Time (Ex Chennai)	Direct Vessel Frequency
Tilbury, UK	Yes	20 Days	Weekly
Durban, SA	Yes	18 Days	Fortnight
Apapa, Lagos	Yes	30 Days	Fortnight
Tema, Ghana	Yes	32 Days	Fortnight
Norfolk & New York, US	Yes	28 Days	Weekly



From Table 14 it is clear that it takes four weeks for a job to be shipped from Chennai (Southern part of India) to New York. In response to the above information, one of the book publishers who was likely to buy from India during the next three years mentioned that he would plan well in advance keeping in mind the turnaround times to give him sufficient time to receive the products from India. The final destination of the products to be shipped might also have a major influence. Shipping the jobs to the east coast of the US might take far less time than shipping the jobs to the west coast.

With regard to quality being a barrier, there seemed to be some misconception by the Indian print service providers of their potential US customers. Although most of the US book publishers who offshored but not to India were concerned about the quality of the service provided by Indian printers, Indian printers did not regard “quality” as a major barrier. In fact, one of the Indian print service providers mentioned that US clients’ knowledge of their job is not up to the mark. Hence, there seems to be a communication gap between the US print buyers and Indian print service providers. The lack of communication may be in part due to the different printing standards followed by the nations. The US follows Specification for Web Offset Publication (SWOP), while Asian printers follow ISO 2846. Again, if both the parties involved can agree upon a fixed standard at the inception, then a smooth communication platform can be established.

Finally, it is quite clear from the survey data that Indian print service providers need to create a brand name among the US print buyers. Many US book publishers were skeptical about the printing and manufacturing capability of Indian print service providers. This can probably be attributed to the development of the IT and service industries in India. Hence, many of the surveyed publishers said that they were well aware of the pre-media and design capabilities of the Indian print service providers but did not consider them pioneers in the manufacturing part of the printing process.

## **Conclusion**

To conclude, there is definitely a potential for Indian print service providers to offer services to US print buyers. The opportunities may exist in niche markets, and it is up to Indian print service providers to find and capitalize on such available opportunities. However, US print buyers—book publishers in particular—have their reasons for not buying from India. But if the Indian print service providers can work with the US print buyers to overcome such barriers or find a solution that is mutually beneficial for both the parties, then there is no reason why India cannot compete with China in providing print solution services to the US print buying market.

## **Recommendations for Indian Print Service Providers Who Wish to Offer Services to US Print Buyers**

Based on information from the study, the following recommendations will provide Indian print service providers who are looking to offer services to US print buyers a fair idea of the expectations of their potential US customers:

Create a brand name among US print buyers. Ways to do that include opening a sales office in the US and participating in book fairs and conferences. It is interesting to note that many book publishers who purchase their print requirements offshore use such book fairs and conferences to locate potential offshore print suppliers.

Pay more attention to the quality requirements of potential US print buyers. From the data collected, it is quite clear that many US book publishers who purchased offshore but not from India were concerned about the quality of the products manufactured by the Indian print service providers. Hence, it would be useful for the Indian print service providers to establish quality standards that will consistently enable them to manufacture products that meet the expectations of US print buyers.

Establish a common medium for communication that will enable buyers and print providers to express their requirements, needs, and expectations. It is quite clear from the data that some of the book publishers are not happy with the quality and service offered by Indian print service providers, and some of the Indian print service providers are unhappy with the files and pre-media work

submitted by US print buyers. For a quality product to be manufactured, every aspect of the print process from pre-media to distribution must be accurate and clearly understood by both sides.

Since turnaround time is a factor that is considered important by US print buyers (book publishers), it is imperative for Indian print service providers to be accurate with their planning and scheduling. From the data provided by Multivista Global Ltd., which is a printing company located in the southern part of India, the frequency of vessels leaving the port is not that high. There seems to be only one vessel that leaves weekly to New York from the port of Chennai. This may also be the case in other ports located in India. Hence, the Indian print service providers must strive to achieve optimum efficiency with planning and scheduling, which will help improve turnaround times. One of the interviewed book publishers mentioned that India would become a preferred destination for offshore printing if airfreight costs could be reduced drastically. However, until that happens, sea freight will be the most viable option.

Offshoring of design services by US print buyers seem to be an upcoming trend. One of the book publishers mentioned that design is the most expensive part of the print process, due to the amount of labor involved in it. He stated that he was planning to offshore his design work and would encourage Indian print service providers to aggressively market for this service.

## **Recommendations for US Print Buyers Who Wish to Purchase Print Products From India**

It is imperative for US print buyers to clearly understand and study the capabilities of their potential Indian print service providers. Some of the US book publishers stated that they had had some bad experiences dealing with Indian print service providers, especially with regard to turnaround times. This could probably be due to the fact that they misinterpreted the capability of the concerned Indian print service provider. Extensive knowledge of the production capabilities of their potential print suppliers would enable print buyers to determine whether their print suppliers are being accurate with their planning and scheduling.

The difference in perception of quality may also be attributed to the different quality standards followed by US print buyers and Indian print service providers. Specification for Web Offset Printing (SWOP) is the quality standard followed in the US, and ISO 2846 is generally the quality standard followed by Indian print service providers. The concerned parties should agree on a common standard before proceeding with the production. The print buyers can also check on the proofing system used by the potential print supplier.

With some of the book publishers unhappy with the pricing offered by Indian print suppliers and a few Indian print suppliers mentioning the lack of profits in the jobs from US print buyers, an interesting fact can be drawn. The US print buyers might have the misperception that offshoring the jobs to India will

result in substantial cost savings. This depends on the technology present at the supplier end. Availability of cheap labor is one of the main reasons Indian print service providers are able to offer competitive pricing. However, if the supplier has invested in the state-of-the-art technology, then the effect of the presence of cheap labor at their end will be miniscule. However, the quality of service offered by suppliers with such state-of-the-art technology will meet the global benchmark for quality. Hence, print buyers must consider their priorities and weigh their options before deciding on their print suppliers.

One of the interviewed book publishers mentioned that he would plan in such a way that the firm has sufficient time to receive the products offshored, even in case of any delays at the supplier's end or at the logistics and shipment centers. Planning is paramount for print suppliers as well as print buyers. Moreover, due to the increased security at US ports, print buyers must always plan in such a way that they have sufficient time to receive the products.

### **Recommendations for Further Study**

From this study, it is apparent that there are some areas that are worthy of further study. First, it is clear from the surveyed data that books are one of the most commonly offshored products. Hence, a study that focuses on Indian book printers and manufacturers should be done. This study should focus on bringing out more information about the technology and infrastructure of Indian book printers and manufacturers, such as favorable and unfavorable government

policies. The study should also focus more on logistics and transportation. It is clear from the surveyed data that if airfreight rates were reduced, India would certainly become a preferred destination for offshore printing. A survey of some of the airfreight companies in India would be informative.

This study has highlighted a useful fact for US print service providers. Cost and competitive pricing offered by offshore printers seem to be the major force behind this trend of globalization. Hence, if US print service providers can find a solution to reduce their prices, then they can compete aggressively with offshore print service providers. A further study on how to make US print service providers competitive with offshore print service providers would be beneficial.

## **Bibliography**



## Bibliography

Anayath, R. (2007). The Indian graphis Arts Industry, its Trends, Current Status, and Technology Trends. India: Heidelberg.

Association for Suppliers of Printing, Publishing, and Converting Technology. (2006). *NPES arrives in India*. Retrieved April 6, 2007, from [http://www.npes.in/view\\_news.asp?newsid=55](http://www.npes.in/view_news.asp?newsid=55)

Bauer, C. (2006, August). Danger lurks offshore for American printers. *Book Business*, 9(5), 10. Retrieved June 27, 2007, from ProQuest Web site: <http://ezproxy.rit.edu/login?url=http://proquest.umi.com.ezproxy.rit.edu/pqdweb?did=1107042021&sid=5&Fmt=3&clientId=3589&RQT=309&VName=PQD>

Bland, J. (2004, March 9). *Book market overview published*. Retrieved June 8, 2005, from [www.gain.net/PIA\\_GATF/newsroom/archives/p0304a.html](http://www.gain.net/PIA_GATF/newsroom/archives/p0304a.html)

Buss, D. D. (2005). *Growing more by doing less: Outsourcing*. Retrieved March 25, 2005, from <http://www.outsourcebackchina.com/outsource-printing.html>

Costa, P., Rana, V., Trieu, H., & Guntupalli, M. (2006, April 24). *China and India: A comparative study of the manufacturing and services industry*. Retrieved January 6, 2008, from [http://www.umich.edu/~ipolicy/china/4\)%20China%20and%20India,%20A%20Comparative%20Study%20of%20the%20Manufacturing.pdf](http://www.umich.edu/~ipolicy/china/4)%20China%20and%20India,%20A%20Comparative%20Study%20of%20the%20Manufacturing.pdf)

Cullen, C. D. (2006, December). 15 tips for solving the global sourcing puzzle. *Book Business*, 9(7), 30-35. Retrieved July 2, 2007, from ProQuest Web site: <http://ezproxy.rit.edu/login?url=http://proquest.umi.com.ezproxy.rit.edu/pqdweb?did=1179876491&sid=5&Fmt=3&clientId=3589&RQT=309&VName=PQD>

Dick, G. (2005, March). Tips for better color management. *Booktech, the Magazine*, 8(2) 48-49.

- Frauenheim, E. (2005, January 11). *The latest offshore frontier: Printing*. Retrieved March 25, 2005, from <http://news.com.com/2061-1022-5532354.html>
- Hickey, T. (2005, January 31). Outsourcing decisions: they're strategic. *Computerworld*, 39(5), 40.
- Lewin, A. Y., & Furlong, S. (2005). *1st bi-annual offshore survey results*. Duke University CIBER/Archstone Consulting. Retrieved June 25, 2007, from [https://offshoring.fuqua.duke.edu/pdfs/1st\\_highlights.pdf](https://offshoring.fuqua.duke.edu/pdfs/1st_highlights.pdf)
- Mallardi, V. (2004, September 1). *Foreign printing – competitors across continents*. Retrieved March 25, 2005, from [http://www.piworld.com/pi\\_premium/282948667378949.bsp](http://www.piworld.com/pi_premium/282948667378949.bsp)
- The market for overseas print providers* (Monograph). (2006, August). TrendWatch Graphic Arts.
- McKelvey, C. (2003, October 31). Leader: Hidden costs of cheap production. *Precision Marketing*, 15.
- Naselli, V. (2005, March 1). *Offshore printing – Sea change in print buying*. Retrieved March 25, 2005, from [http://www.piworld.com/pi\\_premium/283434775431192.bsp](http://www.piworld.com/pi_premium/283434775431192.bsp)
- Offshore Evolution. (2008). *Capgemini: Consulting, technology, outsourcing*. Retrieved February 10, 2008, from [http://www.capgemini.com/resources/thought\\_leadership/offshoring\\_evolution](http://www.capgemini.com/resources/thought_leadership/offshoring_evolution)
- Offshoring. (n.d.). *Wikipedia*. Retrieved June 25, 2007, from <http://en.wikipedia.org/wiki/Offshoring>
- Sachdeva, D. (2007, May 9). Publishing Offshoring to grow at 35 percent. *THE TIMES OF INDIA*.
- Sherburne, C. (2006, October 2). The art of outsourcing. *Printing News*, 157(15), Retrieved November 8, 2006, from ProQuest Web site: <http://proquest.umi.com.ezproxy.rit.edu/pqdweb?did=1145406651&sid=1&Fmt=3&clientId=3589&RQT=309&VName=PQD>
- Strategies for Management, Inc. (SFMINC). (2005). A critical look at offshore printing.
- Tan, T. (2003, May 19). *Manufacturing offshore*. Retrieved May 19, 2003, from

<http://publishersweekly.reviewsnews.com/index.asp?layout=article&articleid=CA299593>

Webb, J. (2004, September 8). *A critical look at "offshore" printing*. Retrieved March 25, 2005, from [http://www.prweb.com/prfiles/2004/09/08/156536/Offshore\\_Printing\\_Presentation\\_www-sfminc-com.pdf](http://www.prweb.com/prfiles/2004/09/08/156536/Offshore_Printing_Presentation_www-sfminc-com.pdf)

Webb, J. (2005, January 11). *Offshore printing gaining ground; Newly published study analyzes the US. printing industry's growing competition from print imports*. Retrieved March 25, 2005, from <http://www.prweb.com/releases/2005/1/prwebxml195117.php>

Webb, J. W., LiPetri, J. R., Papineau, D., & Naselli, V. (2005). *A critical look at offshore printing*. Strategies for Management.

Weinstein, M. (2005, January). Vacation catalogers travel overseas for printing. *Catalog Age*, 22(1), 22-2.

## **Appendix A**

## **Appendix A**

### **Cover Letter for USA Book Publishers Survey**

Dear Print Buyer:

We are a research project team from the College of Imaging Arts & Sciences at Rochester Institute of Technology, Rochester, NY.

We are conducting a series of studies of trends in foreign exports of printing services into the U.S. market. In one project we are focusing on Indian book manufacturing. We have designed a survey for U.S. buyers of book printing services. If you would like to help us shape our investigation of the potential impact of Indian print services in the US market, please take a few minutes to complete our survey. We are interested in your perspective whether or not you currently buy printing from overseas suppliers. As an incentive for completing the survey within five days of receiving this email we will enter your name in a drawing for a new generation silver iPod Nano portable music player with 8GB of RAM!

Upon successful completion of the project, a digital copy of the entire project along with executive summary highlights will be provided to all print buyers who respond to the survey.

You can access the survey by clicking on the following link:

[https://www.surveymonkey.com/s.aspx?sm=oFxlUNwYN3kQrLcmsrnyeA\\_3d\\_3d](https://www.surveymonkey.com/s.aspx?sm=oFxlUNwYN3kQrLcmsrnyeA_3d_3d)

Thank you!

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## **Appendix B**

## Appendix B

### USA Book Publishers Survey

1. Company Name and location
2. In the last 5 years, have you purchased print from offshore? ( Offshore means using a print supplier outside Unites States to purchase printed products)
  - a. Yes
  - b. No

**If you have not purchased print offshore during the last five years, please answer the following questions**

3. Which of the following describes your firm's management perspectives on offshore printing?
  - a. We have talked about it but never seriously considered it
  - b. We have considered it, evaluated, and rejected it
  - c. It has never come up for discussion
  - d. We have gone through an evaluation and plan to do it in the next 12 to 18 months
  - e. Others (please specify)
4. If you have not purchased print offshore, please rate the importance of the following reasons (please rate all items)

Answer Options	Very Important	Important	Somewhat Important	Not Important
Turnaround times				
Unattractive pricing				
Hard to control overseas print project				
Quality concerns				
Legal reasons (e.g. Laws that prohibit buyers from importing from other countries				
Political reasons				
Concern about confidentiality				
Communication				



5. Are there any other comments about purchasing print offshore
6. Are you willing to talk more on offshore printing on phone or in person?
  - a. Yes
  - b. No

**If you have purchased offshore during the last five years, but not from India, please answer the following questions**

7. Have you bought printing from India over the last five years?
  - a. Yes
  - b. No
8. What is the probability that you will buy print from India in the next 3 years?
  - a. Likely
  - b. Somewhat likely
  - c. Unlikely
  - d. Others (please specify)
9. If you are not planning to purchase print from India, please rate the importance of the following reasons for your decision? (please rate all the items)

Answer Options	Very Important	Important	Somewhat Important	Not Important
Turnaround times				
Unattractive pricing				
Hard to control overseas print project				
Quality concerns				
Legal reasons				
Political reasons				
Concern about confidentiality				
Communication				

10. From what other countries have you purchased print over the last five years? (check all that apply) \_\_\_\_\_
  - a. China
  - b. Singapore
  - c. Hong Kong
  - d. Mexico

- e. Canada
  - f. South America
  - g. Europe
  - h. Others (please specify)
11. Are there any other comments with regards to not purchasing print from India?
12. Are you willing to talk about offshore printing more on phone or in person?
- a. Yes
  - b. No

**If you are currently purchasing from India, please answer the following questions**

13. What percentage of your total expenditures in 2006 was from printing services bought from India?
14. What percentage of your total expenditures in 2007 do you anticipate will be from India?
15. What is your typical cost savings on a job purchased from India compared to pricing offered by the US print suppliers?
16. On an average how long does it take for a job to get completed, right from the time print ready file is submitted until the time the product reaches the final destination?(In weeks)
- a. For US print providers
  - b. For Indian print providers
17. What is the average print run of the jobs you offshore to India?
18. Primarily what kind of books do you source from Indian print service provider(s)?
- a. Text books
  - b. Coffee table books
  - c. Reference books
  - d. Dictionaries
  - e. Others (please specify)
19. What criteria do you use to select Indian print service providers? (Please rate all the items)

<b>Answer Options</b>	<b>Very Important</b>	<b>Important</b>	<b>Somewhat Important</b>	<b>Not Important</b>
Turnaround times				
Technology and infrastructure				
Range of services provided by Indian print service providers				
Political stability				
Confidentiality				
Performance of the entire operation under one roof, right from pre media till distribution				

20. Would you prefer for the Indian Service provider to have a sales service branch in US?

- a. Yes
- b. No
- c. Does not really matter

21. How do you locate the Indian print service provider

- a. Internet
- b. Publications
- c. Referral
- d. Fairs
- e. Agents
- f. Catalogs
- g. Others (please specify)

22. What is your overall perspective on dealing with Indian print service providers? (Please include perceptions, advantages, disadvantages, etc).

23. Are you willing to talk more on offshore printing on phone or in person?

- a. Yes (If YES, please provide contact details)
- b. No

## Appendix C

## **Appendix C**

### **Cover Letter for Indian Print Service Providers Survey**

Dear Indian Print Service Provider:

We are a research project team from the College of Imaging Arts & Sciences at Rochester Institute of Technology, Rochester, NY.

We are conducting a series of studies of trends in foreign exports of printing services into the U.S. market. In one project we are focusing on Indian book manufacturing. We have designed a survey for U.S. buyers of book printing services. If you would like to help us shape our investigation of the potential impact of Indian print services in the US market, please take a few minutes to complete our survey. We are interested in your perspective whether or not you currently provide service to the US print buyers.

On successful completion of the project, a digital copy of the entire project along with executive summary highlights will be provided to all the Indian print service providers who responded to the survey.

We once again appreciate your patience in taking the time off to respond to the survey.

You can access the survey by clicking on the following link:

[https://www.surveymonkey.com/s.aspx?sm=yzTYb5j7qRs\\_2b\\_2bB92VaiC0Q\\_3d\\_3d](https://www.surveymonkey.com/s.aspx?sm=yzTYb5j7qRs_2b_2bB92VaiC0Q_3d_3d)

Thank you!

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## Appendix D

## **Appendix D**

### **Indian Print Service Providers Survey**

1. Company name and location
2. How long has your company been in business? (years)
3. Number of Employees
4. Who are the investors in your company? (Check all that apply)
  - a. Indian Investors
  - b. US Investors
  - c. Other Global Investors (please specify)
5. Is your company?
  - a. Private Limited
  - b. Public Limited
  - c. Closely Held
  - d. Sole Proprietorship
  - e. Joint Stock Company
  - f. Other (Please Specify)
6. Annual Sales in 2006 (Lacs):INR
7. Expected Sales in 2007 (Lacs): INR
8. To which of the following category does your press belong to? (Check all that apply)
  - a. Commercial Printers
  - b. Book Printers and Manufacturer
  - c. Packaging Printers
  - d. Others (Specify)
9. Other than printing, what other kind of services do you offer? (Check all that apply)
  - a. Graphic Design
  - b. Information Management
  - c. E-Publishing
  - d. Project Management
  - e. Binding (folding, stitching, sewing, and perfect binding)
  - f. Special services (Perforation, lamination, etc)
  - g. Supply Chain Management
  - h. Digital Asset Management
  - i. CD-ROM production
  - j. Digital Printing



- k. Web Development and hosting
  - l. Logistics and distribution
  - m. Others (please specify)
10. Do you work for customers that are located in United States?
- a. Yes
  - b. No

**If you are currently selling services to the US print buyers, please answer the following questions**

11. What kind of work do you do for the U.S customers? (Check all that apply)
- a. Printing and Manufacturing of Color books
  - b. Printing and Manufacturing of Black and White books
  - c. Information Management
  - d. E-Publishing
  - e. Graphic Designing
  - f. Pre-Media
  - g. Supply Chain Management
  - h. CD-ROM Production
  - i. Digital Asset Management
  - j. Newspapers
  - k. Packaging
  - l. Labels
  - m. Quick Printing
  - n. Others (please specify)
12. What percentage of your revenue during 2006 came from US customers?
13. What percentage do you expect will come from US customers in 2007?
14. Are the jobs purchased by US customers:
- a. Shipped back to United States
  - b. Shipped to other countries
  - c. Variable (some are shipped back to US while some to other countries)
15. What is the average print run of the jobs purchased by U.S print buyers?
- a. Less than 5000 copies
  - b. Between 5000 and 20,000 copies
  - c. Between 20,000 and 50,000 copies
  - d. Above 50,000 copies
16. How do you define the quality of the jobs that are purchased by the US Print buyers
- a. Meets global benchmark for quality
  - b. Does not meet global benchmark for quality

- c. Variable
- 17. What is the average turnaround times of the jobs purchased by U.S print buyers, right from the time you receive the files till the time the product reaches the final destination?
  - a. Five days or less
  - b. Ten days or less
  - c. Between 10 and 20 days
  - d. Above 20 days
- 18. Is the labor intensity of the jobs purchased by U.S print buyers:
  - a. High
  - b. Moderate
  - c. Highly automated
  - d. Variable
- 19. Do you have anything else to say about offering services to the U.S print buying market?
- 20. Will you be willing to talk in person
  - a. Yes
  - b. No

**If you are not currently selling services to the U.S print buying market, please answer the following question**

- 21. Are you actively seeking jobs from US?
  - a. Yes
  - b. No
- 22. If yes, what method(s) do you use? (Check all that apply)
  - a. Sales office in USA
  - b. Agents and Brokers
  - c. Print fairs and trade shows
  - d. Internet marketing
  - e. Industry association
  - f. Others (please specify)
- 23. Rate the importance of barriers that are inhibiting your growth in the US print buying market. (Check all that apply)

Answer Options	Very Important	Important	Somewhat Important	Not Important
Logistics and shipping				
Turnaround times				
Unable to meet the price expectation				
Unprofitable jobs				
Unable to meet the quality requirements				
Requires huge capital investment and technology upgradation				
Political pressure				
Legal Reasons				

24. Do you see the Indian print service providers competing with China in the near future in providing print solution services to the US print buyers?
- Yes
  - No
  - Possibility
  - Unsure
  - Depends on Various factors (please specify)
25. Do you have anything else to say about offering services to the US Market?
26. Will you be willing to talk more about this on the phone?
- Yes (If YES, please provide contact details)
  - No